

TC-WR720/WR720A

SERVICE MANUAL

US Model

Canadian Model

E Model

TC-WR720A

AEP Model

TC-WR720



This photo is TC-WR720.

SPECIFICATIONS

Recording system 4-track 2-channel stereo
 Fast winding time Approx. 90 sec. (with HF-60 cassette)
 Bias AC bias
 Signal-to-noise ratio (NAB, at peak level)

Dolby NR switch	OFF	B-TYPE ON	C-TYPE ON
Cassette			
Type IV (Sony METAL-ES)	58dB	66dB	73dB
Type II (Sony UX-S)	57dB	65dB	72dB
Type I (Sony HF-S)	55dB (WR720) 54dB (WR720A)	63dB	70dB

Total harmonic distortion

1.0% (with Sony METAL-ES cassettes)

Frequency response (DOLBY NR OFF)

Type IV cassette (Sony METAL-ES)	30-18,000Hz (± 3 dB) (WR720) 30-15,000Hz (± 3 dB) (WR720A) 30-14,000Hz (OVU recording) (WR720) 30-13,000Hz (OVU recording) (WR720A)
Type II cassette (Sony UX-S)	30-17,000Hz (± 3 dB) (WR720) 20-15,000Hz (± 3 dB) (WR720A)
Type I cassette (Sony HF-S)	30-15,000Hz (± 3 dB) (WR720) 30-14,000Hz (± 3 dB) (WR720A)

Wow and flutter

0.07% WRMS (NAB)

Inputs

Line inputs (phono jacks)	Sensitivity	77.5mV (-20dB)
	Input impedance	50kohms

Model Name Using Similar Mechanism	TC-WR620
Tape Transport Mechanism Type	TCM-190RB12

Output

Line outputs (phono jacks)	Rated output level	0.44V (-5dB) at a load impedance of 47kohms
	Load impedance	Over 10kohms
Headphones (stereo phono jack)	Output level	0.3mW at a load impedance of 32 ohms

General

Power requirements 120V AC, 60Hz (US, Canadian model)
 220V AC, 50/60Hz (AEP model)
 120, 220, 240, 50/60Hz (E model)

Power consumption 33 watts

Dimensions Approx. 430×135×285mm (w/h/d)
 (17×5³/₈×11¹/₄ inches)

including projecting parts and controls

Weight Approx. 5kg (11 lbs 1 oz) (WR720)

Approx. 4.6kg (10 lbs 3 oz) (WR720A)

Supplied accessories Audio connecting cord (2)

Remote commander (RM-900W)

(E model only)

Conversion adaptor (E model only)

Design and specifications subject to change without notice.

STEREO CASSETTE DECK
SONY[®]



FEATURES

- The Dolby HX PRO* system which improves the linearity of a tape's high-range response during recording.
- A relay function for long recording and playback.
- Automatic tape type detection during playback and recording.
- Auto-synchro dubbing at normal or high (double) speed.
- AMS and memory play functions which provide easy access to desired selections.
- An easy-to-read digital counter which shows the elapsed recording or playback time for decks A and B.

* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

"DOLBY", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT
À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

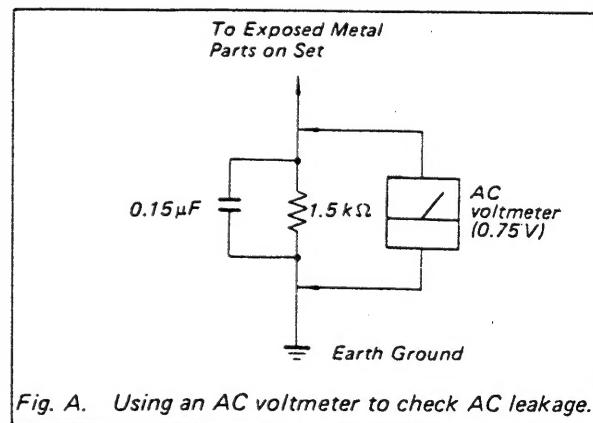
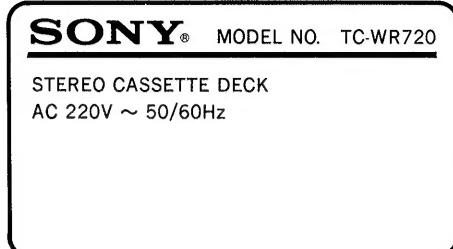


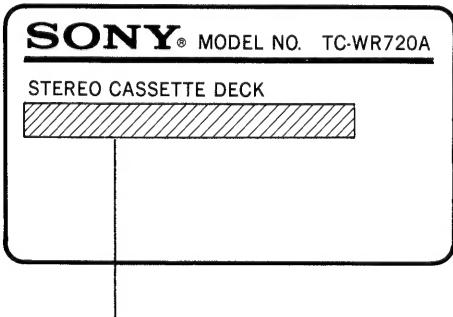
Fig. A. Using an AC voltmeter to check AC leakage.

—MODEL IDENTIFICATION—
(Specification Label)

TC-W720: AEP, WG (West Germany) model



TC-WR720A: US, Canadian, E model



US, Canadian model: AC 120V 60Hz 33W
E model: AC 120, 220, 240V ~ 50/60Hz 33W

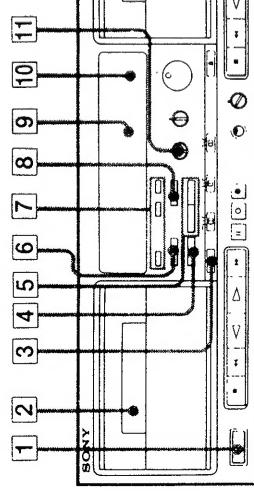
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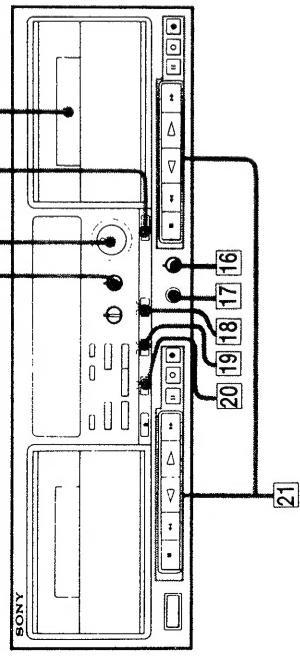
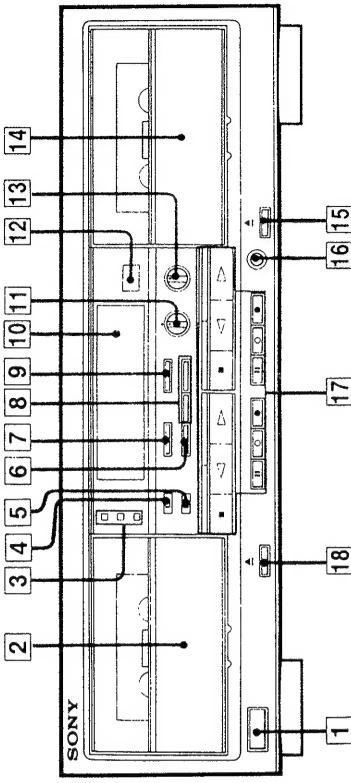
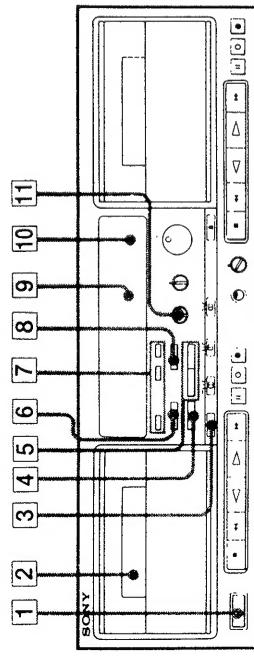
SECTION 1
GENERAL

1-1. LOCATION AND FUNCTION OF CONTROLS

(TC-WR720)



(TC-WR720A)



1 POWER switch

2 CASSETTE holder (deck A)

3 COUNTER buttons
RESET button
MEMORY button
A/B (deck A/B) selector

4 DIR (direction) MODE switch

5 DOLBY NR (Dolby noise reduction) switch

6 A + B REC (recording) button and indicator

7 BLANK SKIP button

8 SYNCHRO DUBBING buttons
HIGH SPEED button
NORM (normal) SPEED button
NORM (normal) SPEED button

9 AUTO PAUSE button

10 DISPLAY panel

11 BALANCE control

12 BALANCE control

13 REC (recording) LEVEL control

14 ▲ eject button (deck B)

15 Cassette holder (deck B)

16 Headphones LEVEL control

17 PHONES (headphones) jack (stereo phone jack)

18 DOLBY NR (Dolby noise reduction) switch

19 DIR (direction) MODE switch

20 TIMER switch

21 Tape operation buttons
■ (stop) button
◀ (leftward fast winding) button
▶ (reverse play) button
■ (forward play) button
▲ (rightward fast winding) button
PAUSE button
REC MUTE (record muting) button
REC (recording) button

13 REC (recording) LEVEL control

14 Cassette holder (deck B)

15 ▲ eject button (deck B)

16 PHONES (headphones) jack (stereo phone jack)

17 Tape operation buttons
◀ (AMS*) (leftward fast winding) button
▶ (AMS*) (rightward fast winding) button
■ (stop) button
▲ (forward play) button
▼ (reverse play) button
■ (stop) button
▲ (AMS*) (rightward fast winding) button
REC MUTE (record muting) button
REC (recording) button

18 ▲ eject button (deck A)

* AMS is an abbreviation for Automatic Music Sensor

12 Remote control sensor

You can remotely control this cassette deck with:

- A remote commander that came with a Sony amplifier or receiver if it has the  mark and cassette deck control capability.
- Any optional Sony remote commander with the  mark

11 BIAS control (deck B)

You can remotely control this cassette deck with:

- A remote commander that came with a Sony amplifier or receiver if it has the  mark and cassette deck control capability.
- Any optional Sony remote commander with the  mark

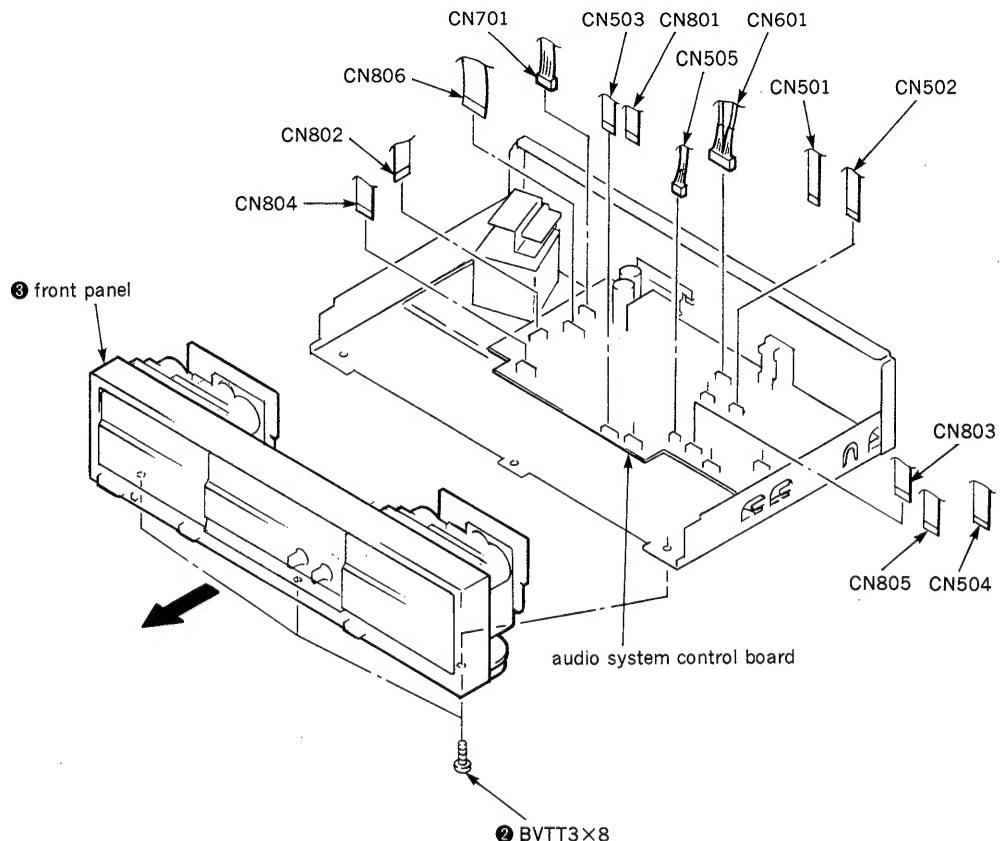
SECTION 2

DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

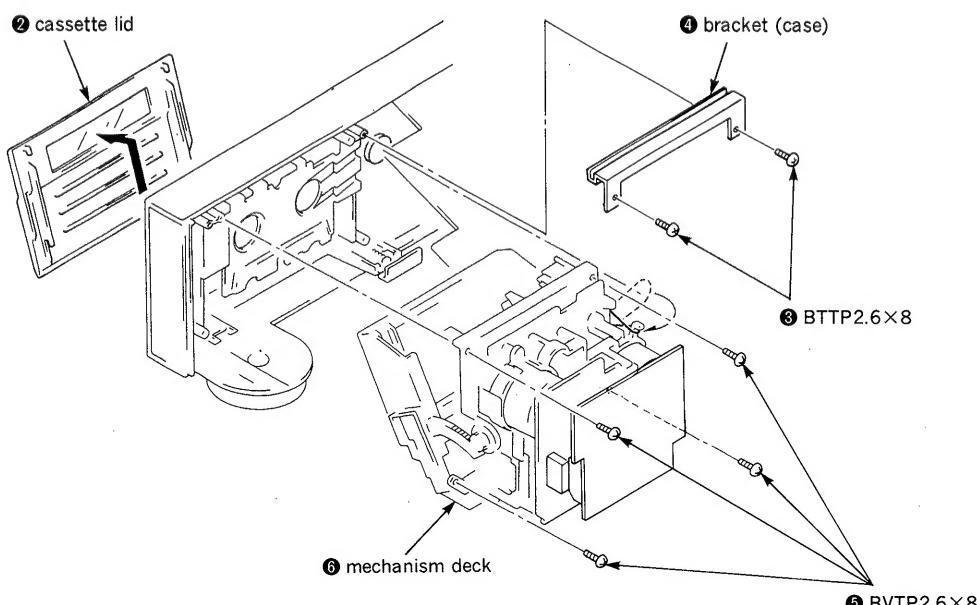
2-1. FRONT PANEL (WR720A)

- 1 Remove the connector from audio system control board.



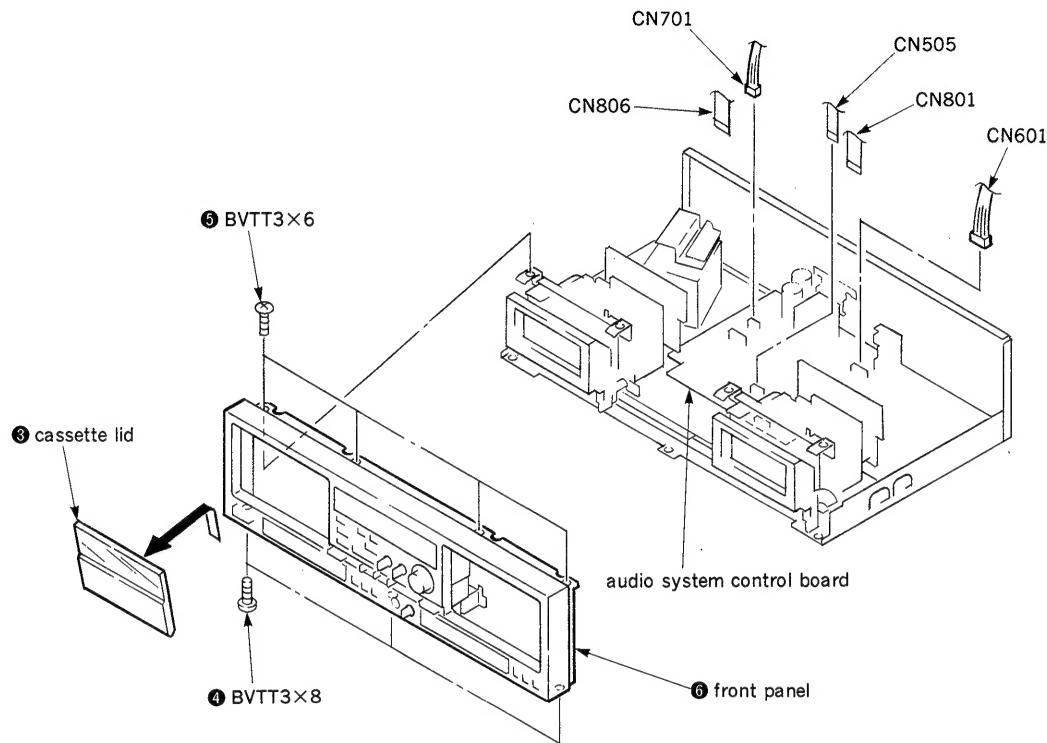
2-2. MECHANISM DECK (WR720A)

- 1 Push the EJECT button.

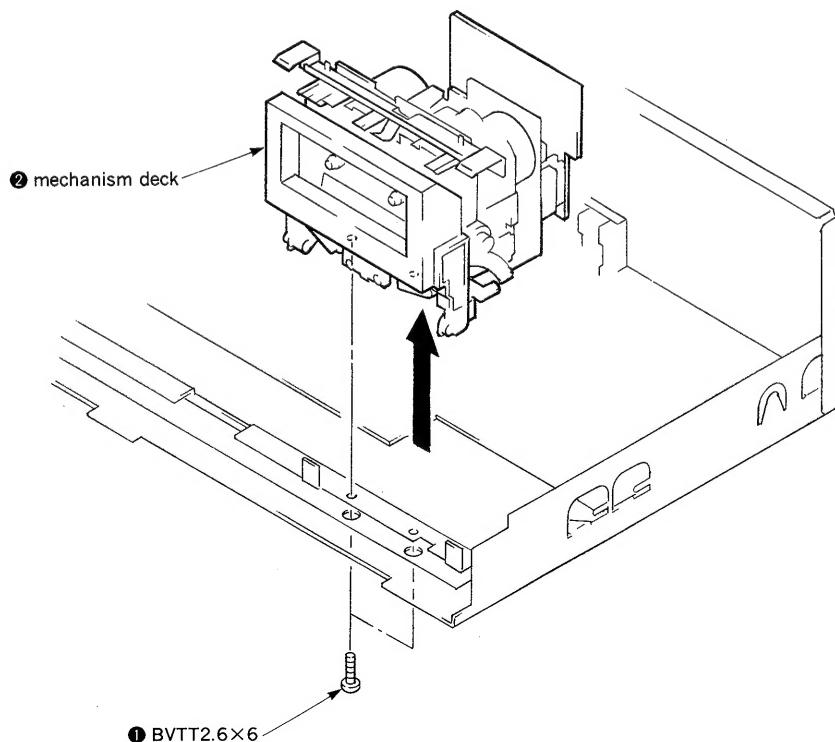


2-3. FRONT PANEL (WR720)

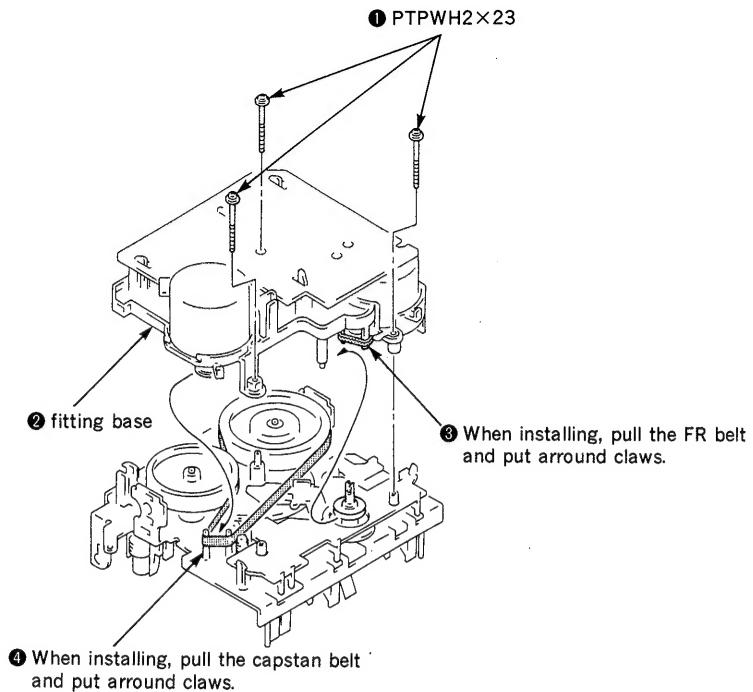
- ❶ Remove the connector from audio system control board.
- ❷ Push the EJECT button.



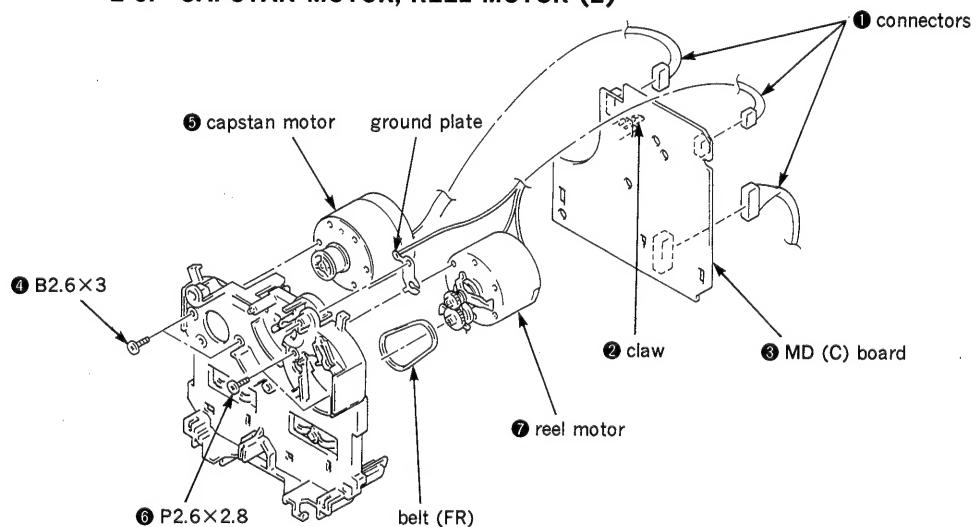
2-4. MECHANISM DECK (WR720)



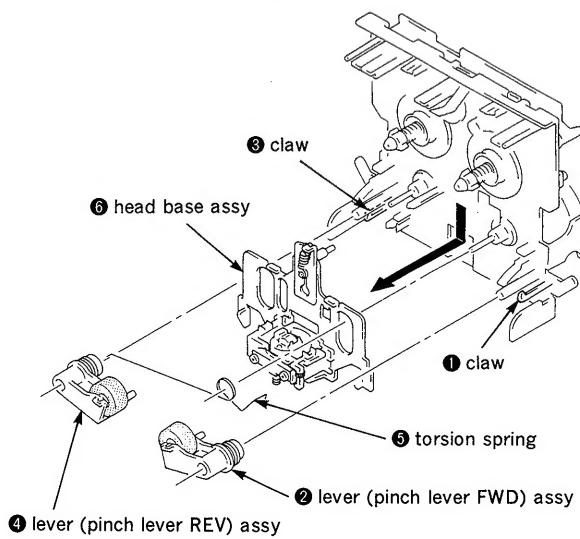
2-5. CAPSTAN MOTOR, REEL MOTOR (1)



2-6. CAPSTAN MOTOR, REEL MOTOR (2)



2-7. HEAD, PINCH ROLLER



SECTION 3 MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idle
2. Demagnetize the record/playback head with a head demagnetizer.
(Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	30 to 65g·cm (0.42 to 0.90 oz·inch)
Forward back tension	CQ-102C	1 to 6g·cm (0.014 to 0.08 oz·inch)
Reverse	CQ-102RC	30 to 65g·cm (0.42 to 0.90 oz·inch)
Reverse back tension	CQ-102RC	1 to 6g·cm (0.014 to 0.08 oz·inch)
Forward, Reverse	CQ-201B	70 to 120g·cm (0.98 to 1.67 oz·inch)

SECTION 4 ELECTRICAL ADJUSTMENTS

PRECAUTION

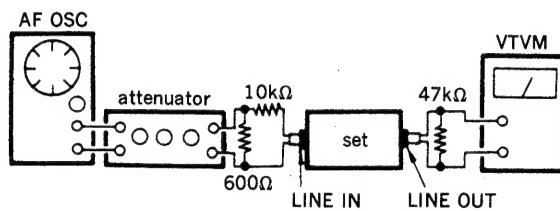
1. The adjustment should be performed in the publication.
(Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.

- Switch position

DOLBY NR switch : OFF
DIR MODE switch : \leftrightarrow
- Standard record position

Deliver the standard input signal level to input jack and set the REC LEVEL control to obtain the standard output signal level as follows.

—Record Mode—



Standard Input Level

Input terminal	LINE IN
source impedance	10kΩ
input signal level	0.25V (-10dB)

Standard Output Level

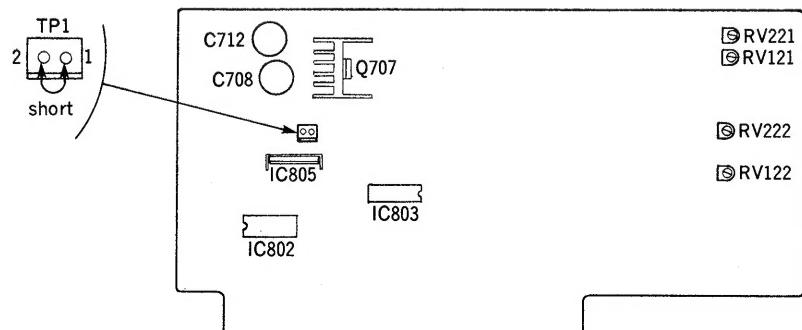
Output terminal	LINE OUT
load impedance	47kΩ
output signal level	0.44V (-5dB)

Test Tape

Tape	Contents	Use
P-4-A100	10kHz, -10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

3. Prior to electrical adjustments, short the connector TP1 (test mode).

audio system control board —component side—



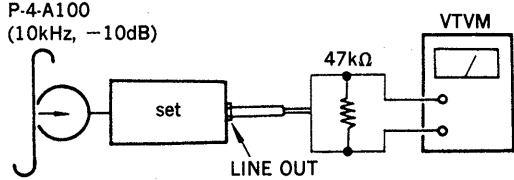
Record/Playback Head Azimuth Adjustment

DECK A **DECK B**

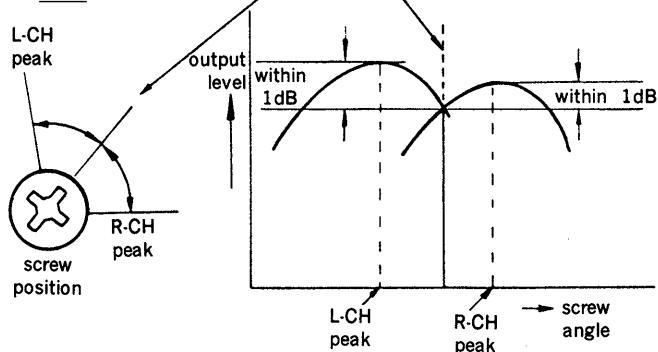
Procedure :

1. Reverse Playback Mode

test tape
P-4-A100
(10kHz, -10dB)

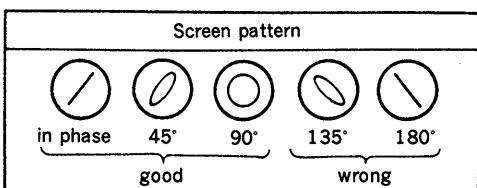
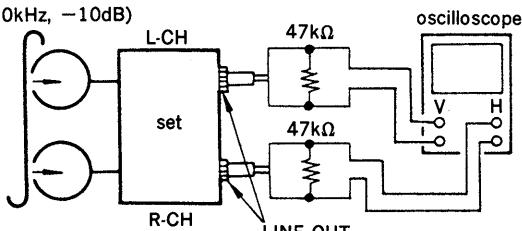


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



3. Playback Mode

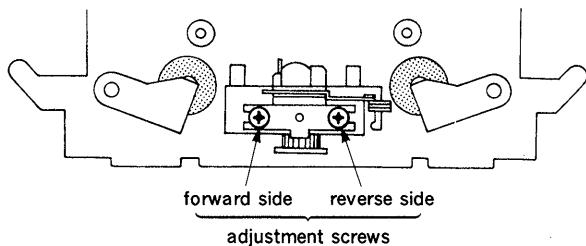
test tape
P-4-A100
(10kHz, -10dB)



4. Change the forward playback mode and repeat the steps 1 to 3.

5. After the adjustment, lock the adjustment screws with suitable locking compound.

Adjustment Location : —record/playback head—



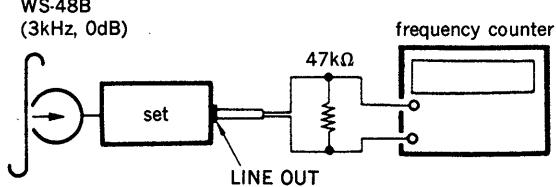
Tape Speed Adjustment **DECK A** **DECK B**

Perform high speed adjustment before normal speed adjustment.

Procedure :

—Forward Playback Mode—

test tape
WS-48B
(3kHz, 0dB)



(high speed adjustment)

1. Keep on pressing the SYNCHRO DUBBING HIGH SPEED switch.
2. Confirm that the frequency counter reading becomes within adjustment limits of $6,000 \pm 60\text{Hz}$ on both of deck A and deck B.
3. If the adjustment limits are not satisfied, adjust each RV72 so that the frequency counter reading becomes within adjustment limits of $6,000 \pm 30\text{Hz}$ on both of deck A and deck B.
4. Change the reverse playback mode and repeat the steps 1 to 3.

(normal speed adjustment)

5. Keep on pressing the SYNCHRO DUBBING NORM SPEED switch.
6. Confirm that the frequency counter reading becomes within adjustment limits of $3,000 \pm 30\text{Hz}$ on both of deck A and deck B.
7. If the adjustment limits are not satisfied, adjust each RV71 so that the frequency counter reading becomes within adjustment limits of $3,000 \pm 15\text{Hz}$ on both of deck A and deck B.
8. Change the reverse playback mode and repeat the steps 5 to 7.

Frequency difference between the beginning and the end of the tape should be within 3%.

Frequency difference between deck A and deck B the beginning of the tape should be within 1.5%.

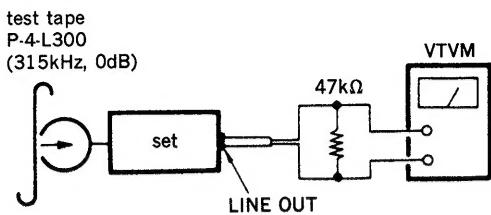
Adjustment Location : MD (C) board (deck A, deck B)

Playback Level Adjustment

DECK A **DECK B**

Procedure :

—Forward Playback Mode—



Adjust each RV11 (L-CH) and RV21 (R-CH) so that the VTVM reading becomes within adjustment limits below on both of deck A and deck B.

Adjustment Limits :

LINE OUT level : $-15 \pm 0.5 \text{dB}$ (0.130 to 0.146V)

Level difference between channels : within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

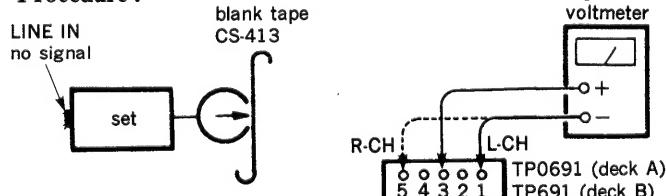
Adjustment Location : MD(C) board (deck A, deck B)

Bias Consumption Current Adjustment

DECK A **DECK B**

This adjustment should be performed when replacing the head assy or step-up transformer (T0391, 0491 (deck A) and T391, 491 (deck B)), or DOLBY HX-PRO IC (IC0691 (deck A) and IC691 (deck B)).

Procedure :



(deck A)

1. Connect the digital voltmeter to test point TP0691.
2. Set RV0391 (L-CH) and RV0491 (R-CH) to mechanical center.
3. Set to forward record mode.
4. Adjust T0391 (L-CH) and T0491 (R-CH) so that the digital voltmeter reading becomes minimum.

(deck B)

5. Similarly, connect the digital voltmeter to test point TP691.
6. Set RV391 (L-CH) and RV491 (R-CH) to mechanical center.
7. Set to forward record mode.
8. Adjust T391 (L-CH) and T491 (R-CH) so that the digital voltmeter reading becomes minimum.

Adjustment Location : HX-PRO board (A) (deck A), HX-PRO board (B) (deck B)

Record Bias Adjustment

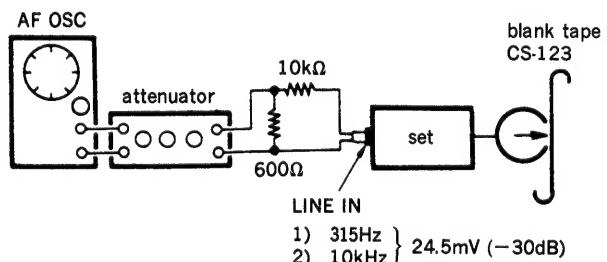
DECK A **DECK B**

Setting :

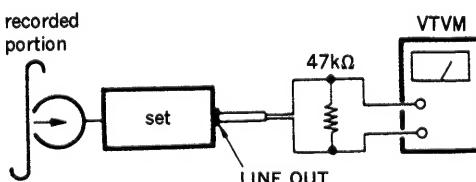
REC LEVEL control : standard record position (Refer to page 8.)

Procedure :

1. Record Mode



2. Playback Mode



(deck A)

3. Playback the signal recorded in step 1, and confirm that the 10kHz playback output level is VTVM reading becomes within adjustment limits below relative to the 315Hz output.
4. If the adjustment limits are not satisfied, adjust each RV0391 (L-CH) and RV0491 (R-CH) so that the VTVM reading becomes within adjustment limits on next page.

(deck B)

5. Similarly, playback the signal recorded in step 1, and confirm that the 10kHz playback output level is VTVM reading becomes within adjustment limits below relative to the 315Hz output.
6. If the adjustment limits are not satisfied, adjust each RV391 (L-CH) and RV491 (R-CH) so that the VTVM reading becomes within adjustment limits on next page.

Adjustment Limits :

10kHz playback output

relative to the 315Hz output: $0 \pm 0.5\text{dB}$

(0.732 to 0.82IV)

Adjustment Location : audio system control board

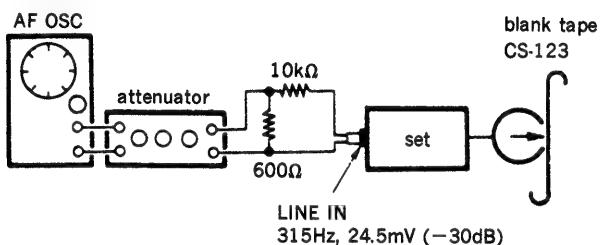
Record Level Adjustment **DECK A** **DECK B**

Setting :

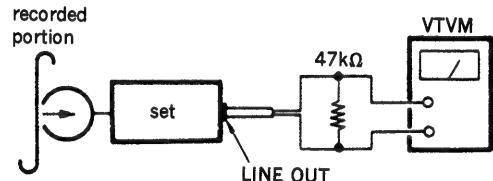
REC LEVEL control: standard record position (Refer to page 8.)

Procedure :

1. Record Mode



2. Playback Mode



(deck A)

3. Playback the signal recorded in step 1, and confirm that the 10kHz playback output level is VTVM reading becomes within adjustment limits below relative to the 315Hz output.
4. If the adjustment limits are not satisfied, adjust each RV121 (L-CH) and RV221 (R-CH) so that the VTVM reading becomes within adjustment limits below.

(deck B)

5. Similarly, playback the signal recorded in step 1, and confirm that the 10kHz playback output level is VTVM reading becomes within adjustment limits below relative to the 315Hz output.
6. If the adjustment limits are not satisfied, adjust each RV122 (L-CH) and RV222 (R-CH) so that the VTVM reading becomes within adjustment limits below.

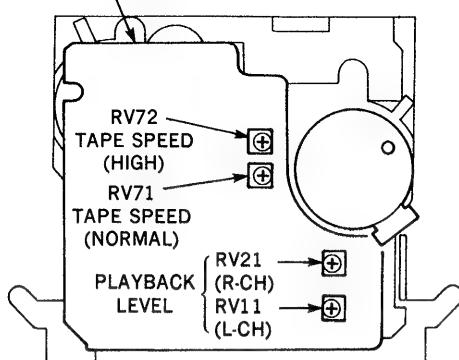
Adjustment Limits :

315Hz playback output level: $-25 \pm 0.5\text{dB}$ (42 to 46mV)

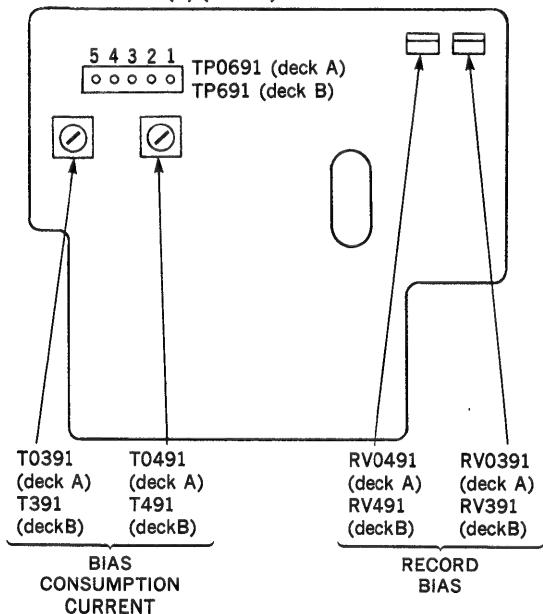
Adjustment Location : audio system control board

—Adjustment Parts Location Diagrams—

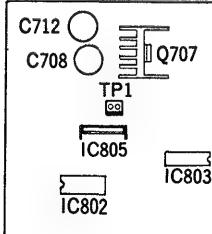
MD (C) board (deck A, deck B)



HX-PRO board (A) (deck A),
HX-PRO board (B) (deck B)



audio system control board



RECORD LEVEL (deck A)

RV121 RV122 (L-CH), (R-CH)

RECORD LEVEL (deck B)

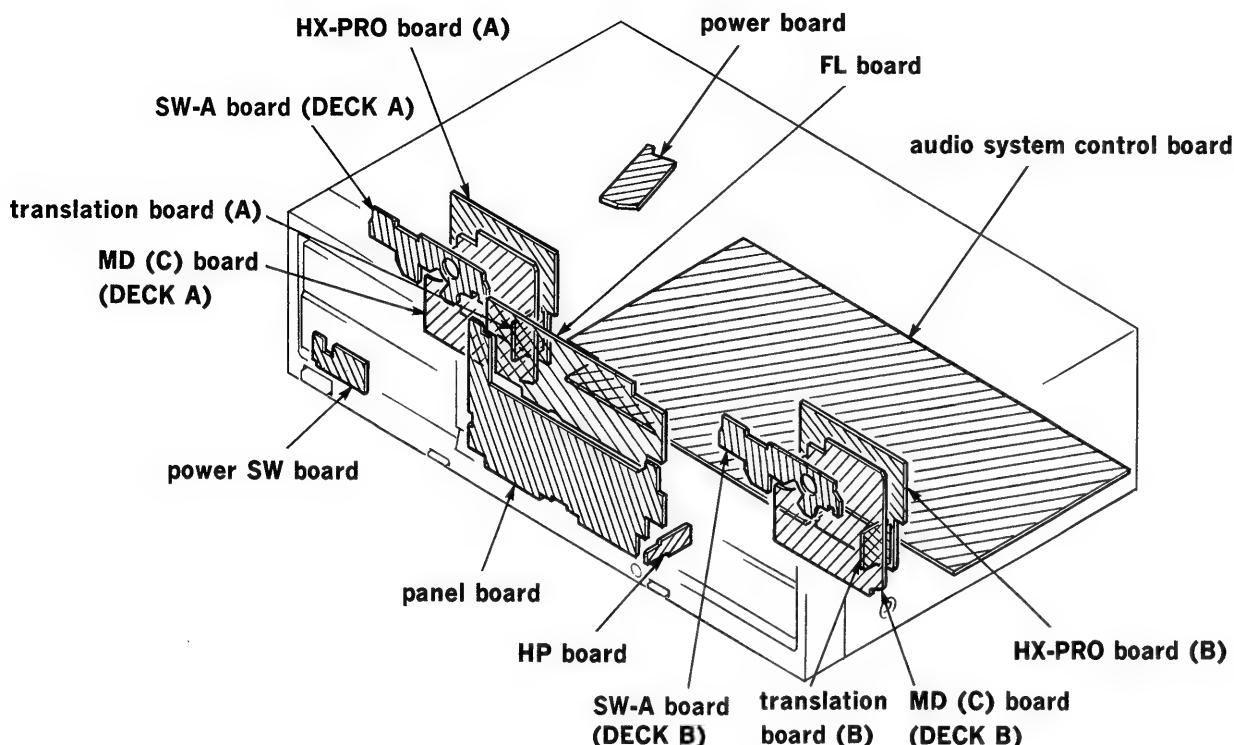
RV221 RV222 (L-CH), (R-CH)

RECORD LEVEL (deck B)

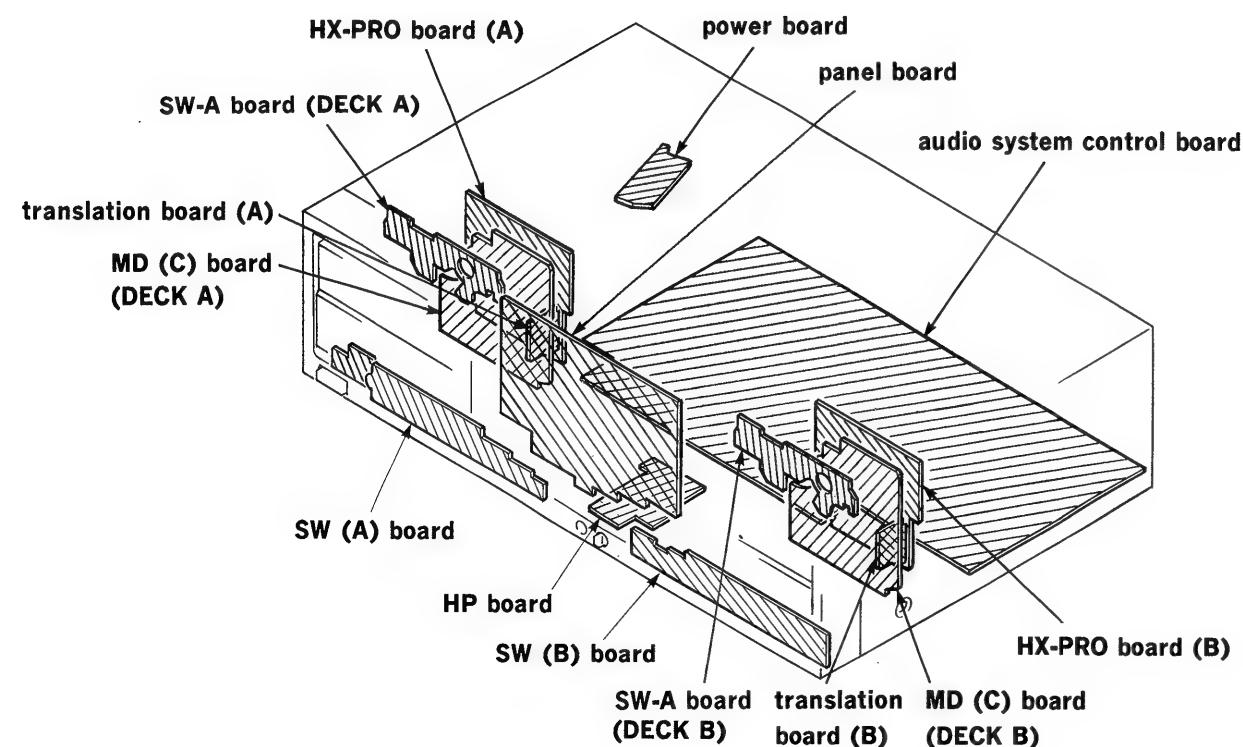
Note : After adjustment, open the connector TP1.

SECTION 5 DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION (TC-WR720A)



(TC-WR720)



5-2. SEMICONDUCTOR LEAD LAYOUTS

DTA114ES
DTA144ES
DTC114ES
DTC143TS
DTC144ES
DTC144WS
2SC2603-EF
2SD1012-FG



HZS6A1L
HZS9A2L
UZL-11L2
UZL-7H1
UZL-7L2
1SS202-1



10E2N
2SA1317-S
2SA1317-STU
2SB1013-4
2SC945-P



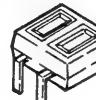
SEL2210S
2SB1187-EF



2SD1761-EF



GP-2S09-C



• Semiconductor Location

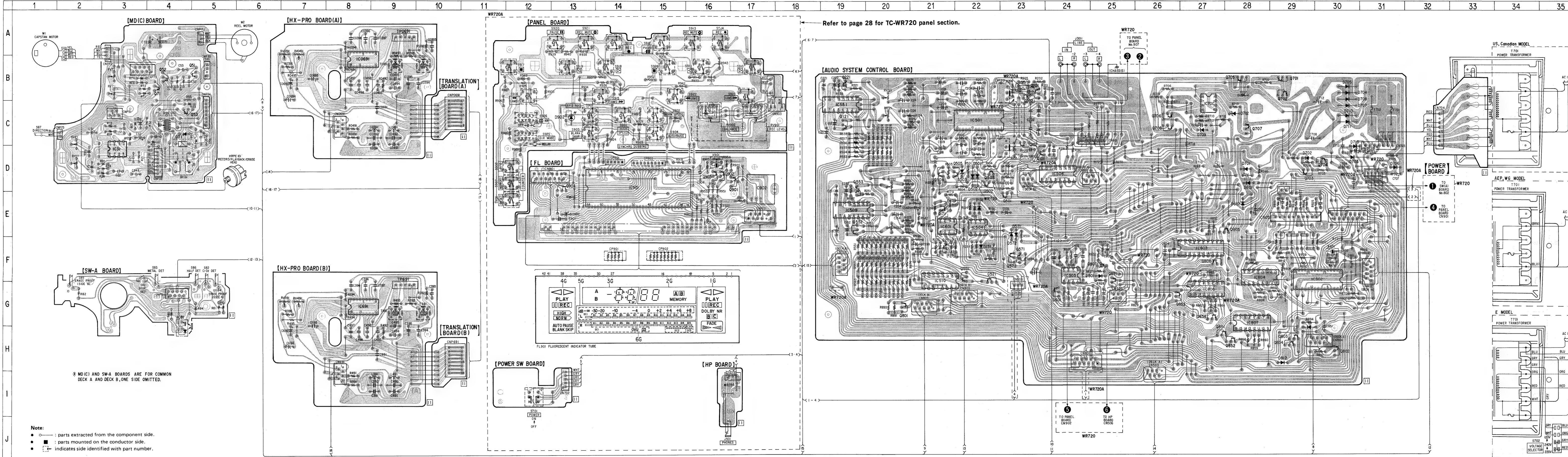
Ref. No.	Location	Ref. No.	Location
D31	C-4	Q51	B-4
D131	E-22	Q52	B-4
D231	F-22	Q53	C-4
D501(※1)	D-22	Q71	B-4
D502	D-22	Q101	D-23
D503	D-22	Q102(※1)	D-23
D571	E-23	Q121	C-19
D572	E-23	Q171	E-21
D601	D-28	Q201	B-23
D602	E-28	Q202(※1)	B-23
D701	D-28	Q221	B-19
D702	D-29	Q271	F-21
D703	D-30	Q501	E-23
D704	B-30	Q502	D-22
D705	B-30	Q503(※1)	D-22
D706	D-31	Q504	D-21
D707	C-30	Q505	D-21
D708	C-30	Q521	F-22
D709	C-27	Q551	F-22
D710	C-30	Q552	E-19
D711	C-30	Q553	D-19
D712	C-28	Q571	F-23
D713	D-30	Q572	F-23
D801	F-25	Q601	G-24
D811	H-29	Q701	B-29
D812	H-29	Q702	B-29
D902(※2)	C-13	Q703	D-29
		Q704	D-30
IC31	D-3	Q705	B-28
IC81	G-4	Q706	C-26
IC501	C-22	Q707	C-28
IC503	F-24	Q708	C-26
IC504	E-22	Q801	G-20
IC506	D-24	Q802	H-30
IC509	E-19	Q803	H-29
IC510	F-21	Q804	H-29
IC551	C-19	Q805	E-28
IC601(※2)	E-21	Q806	F-27
IC691	G-8	Q807	F-25
IC701	C-27	Q851	H-27
IC802	F-29	Q852	H-28
IC803	F-27	Q853	G-26
IC804	F-28	Q854	G-27
IC805	E-29	Q891	G-25
IC806	G-27	Q901(※2)	D-17
IC807	G-28	Q902(※2)	D-16
IC901(※2)	D-14	Q903(※2)	D-16
IC902(※2)	D-17	Q904(※2)	D-13
IC0691	B-8		

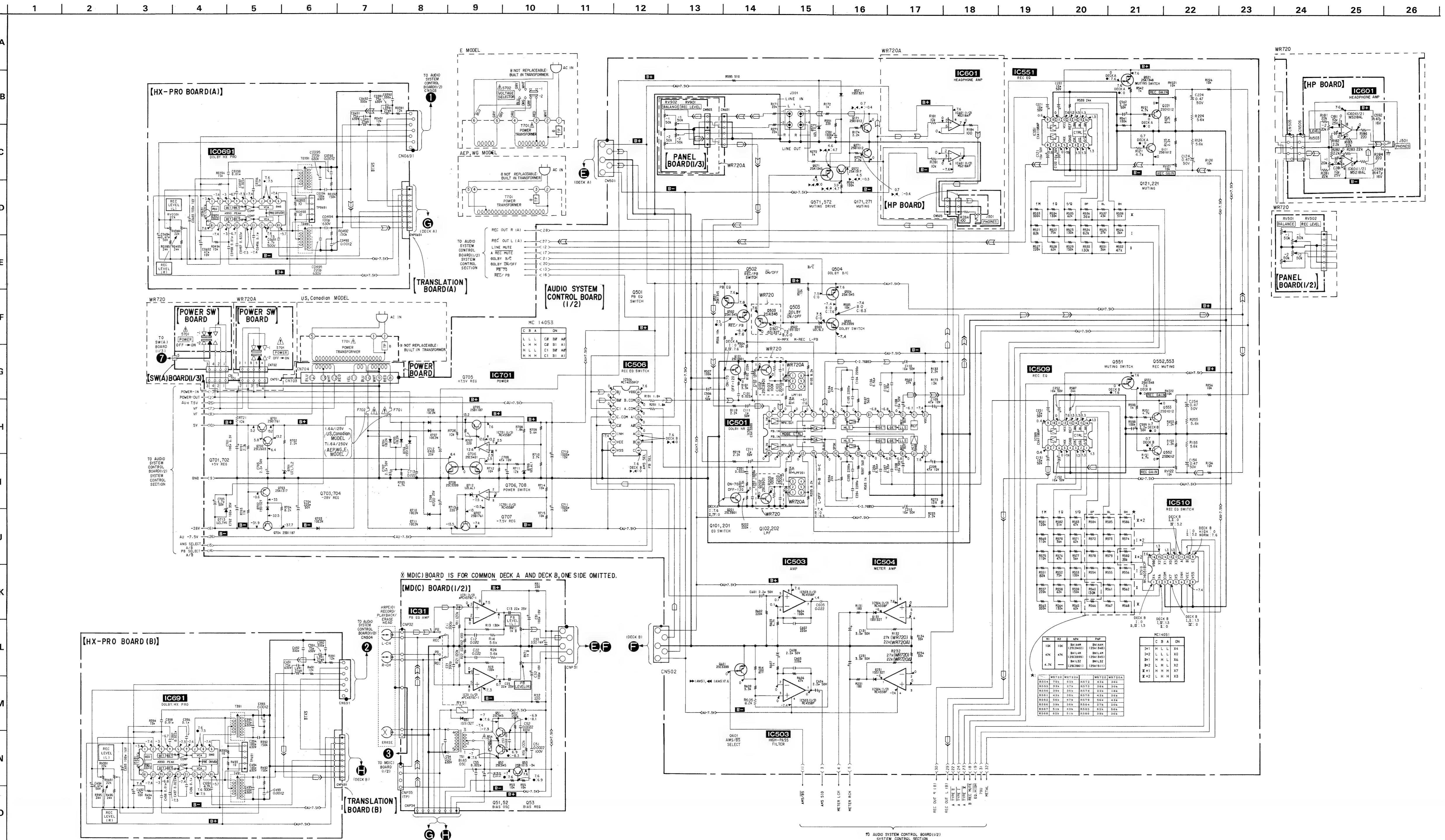
※ 1: Used on TC-WR720 only.

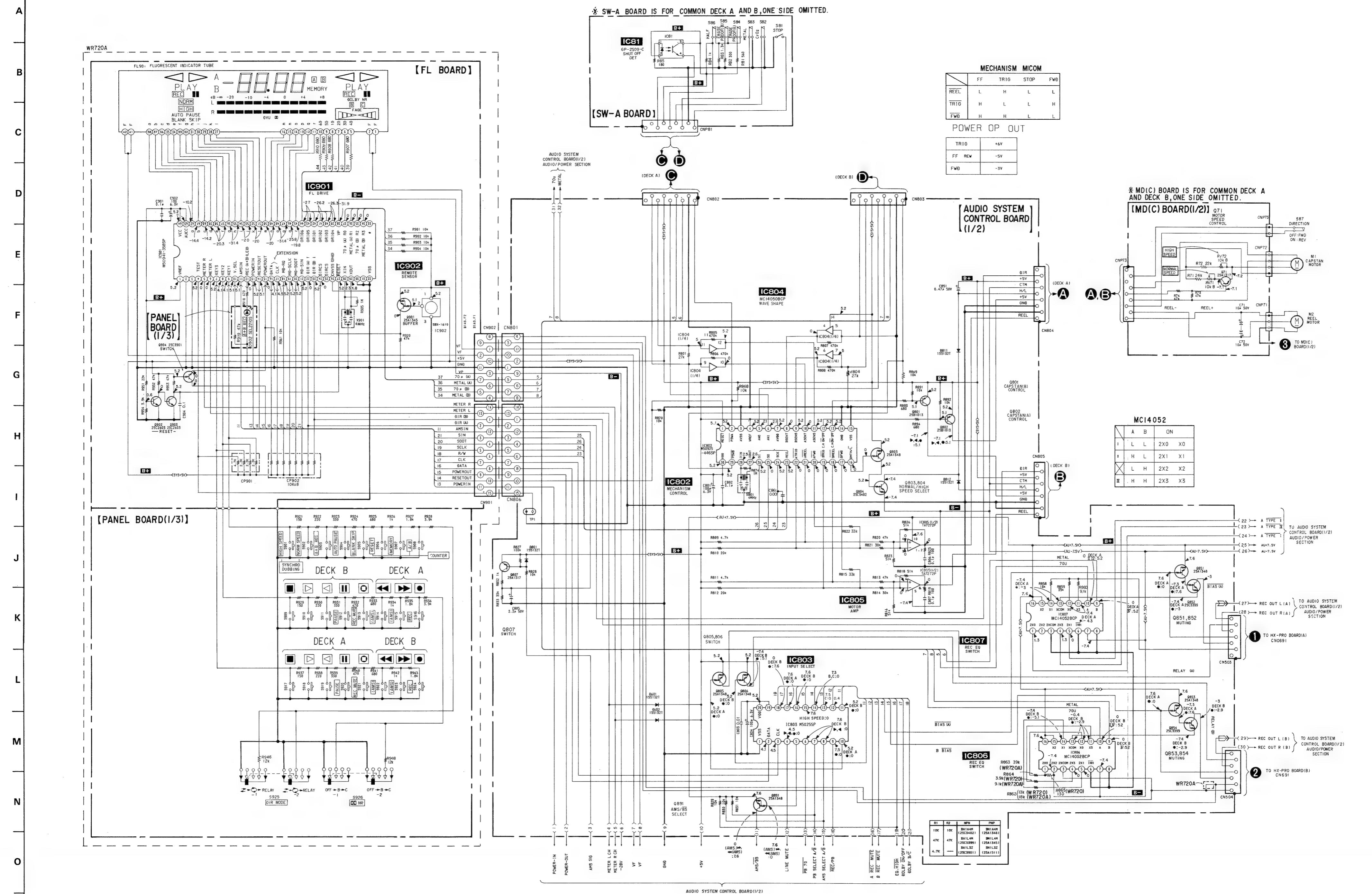
※ 2: Used on TC-WR720A only.

5-3. PRINTED WIRING BOARDS —MAIN SECTION— • Refer to page 13 for Semiconductor Lead Layouts and Semiconductor Location.

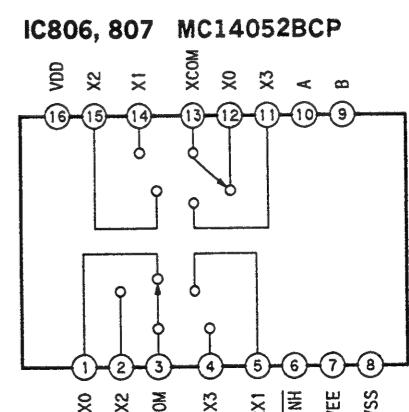
ted from the component side.
ed on the conductor side.







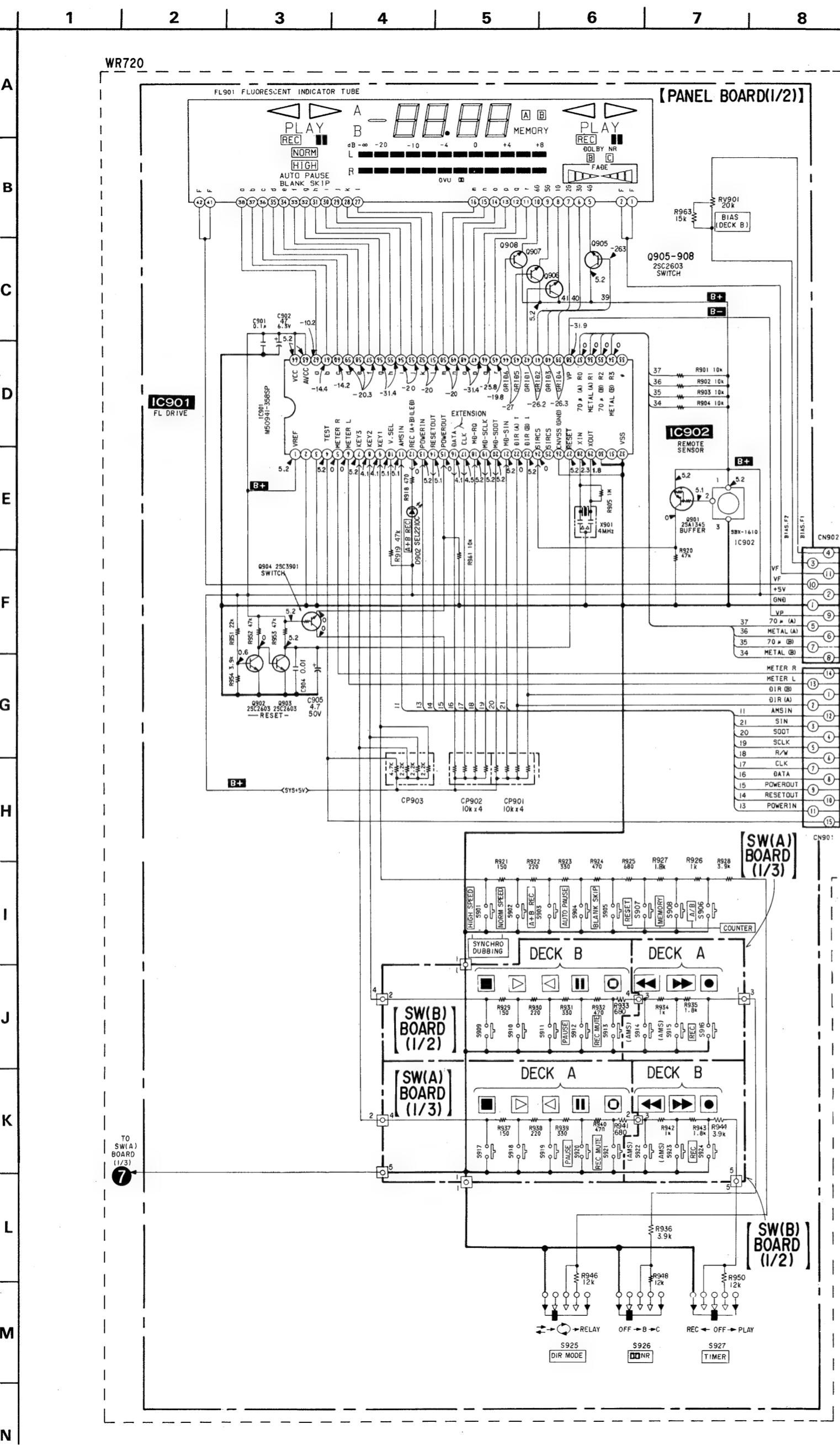
- IC Block Diagrams



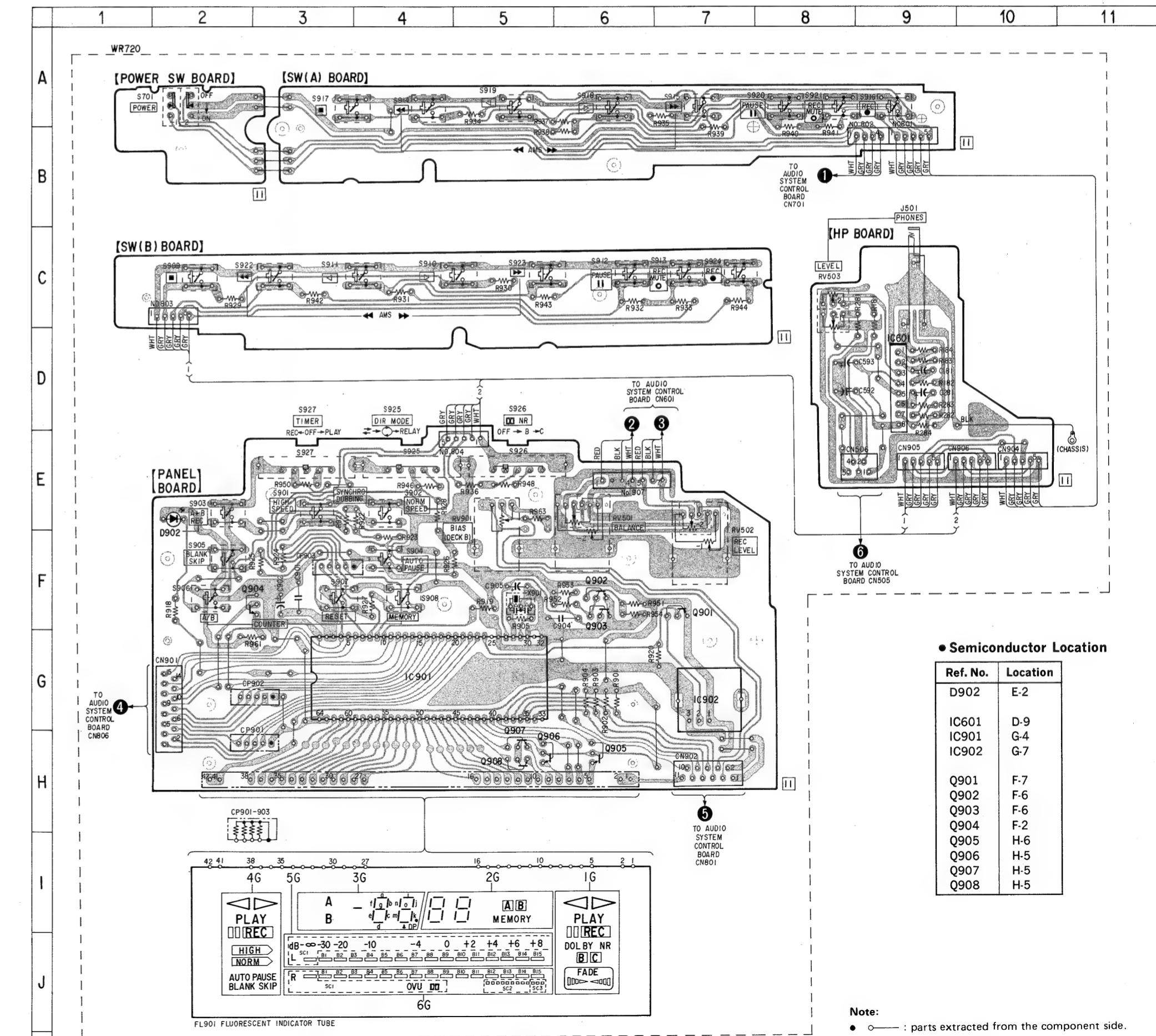
Note:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$
50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- \triangle : internal component.
-  : adjustment for repair.
- Voltage is dc with respect to ground under no-signal conditions.
- no mark: POWER ON
- \blacktriangleright : FWD \blacktriangleleft : REV ● : REC
- Voltages are taken with a VOM (Input Impedance $10M\Omega$). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- \Rightarrow : REC (DECK A)
- \Rightarrow : REC (DECK B)

5-6. SCHEMATIC DIAGRAM —PANEL SECTION—



5-7. PRINTED WIRING BOARDS —PANEL SECTION—



SECTION 6

EXPLODED VIEWS

NOTE:

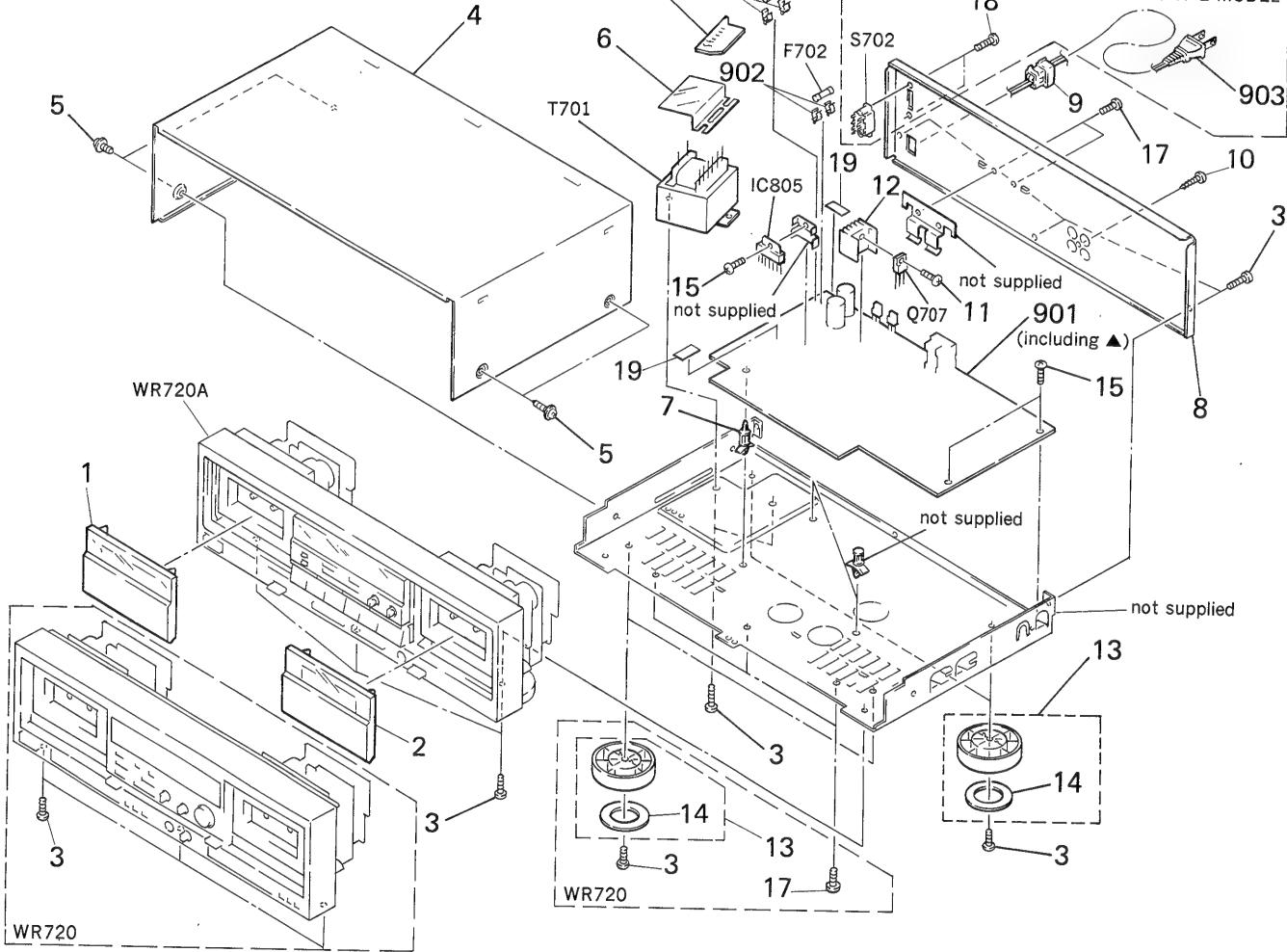
- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked “★” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:
(RED) ... KNOB, BALANCE (WHITE)
↑
Cabinet's Color
- WG ... West Germany model

The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

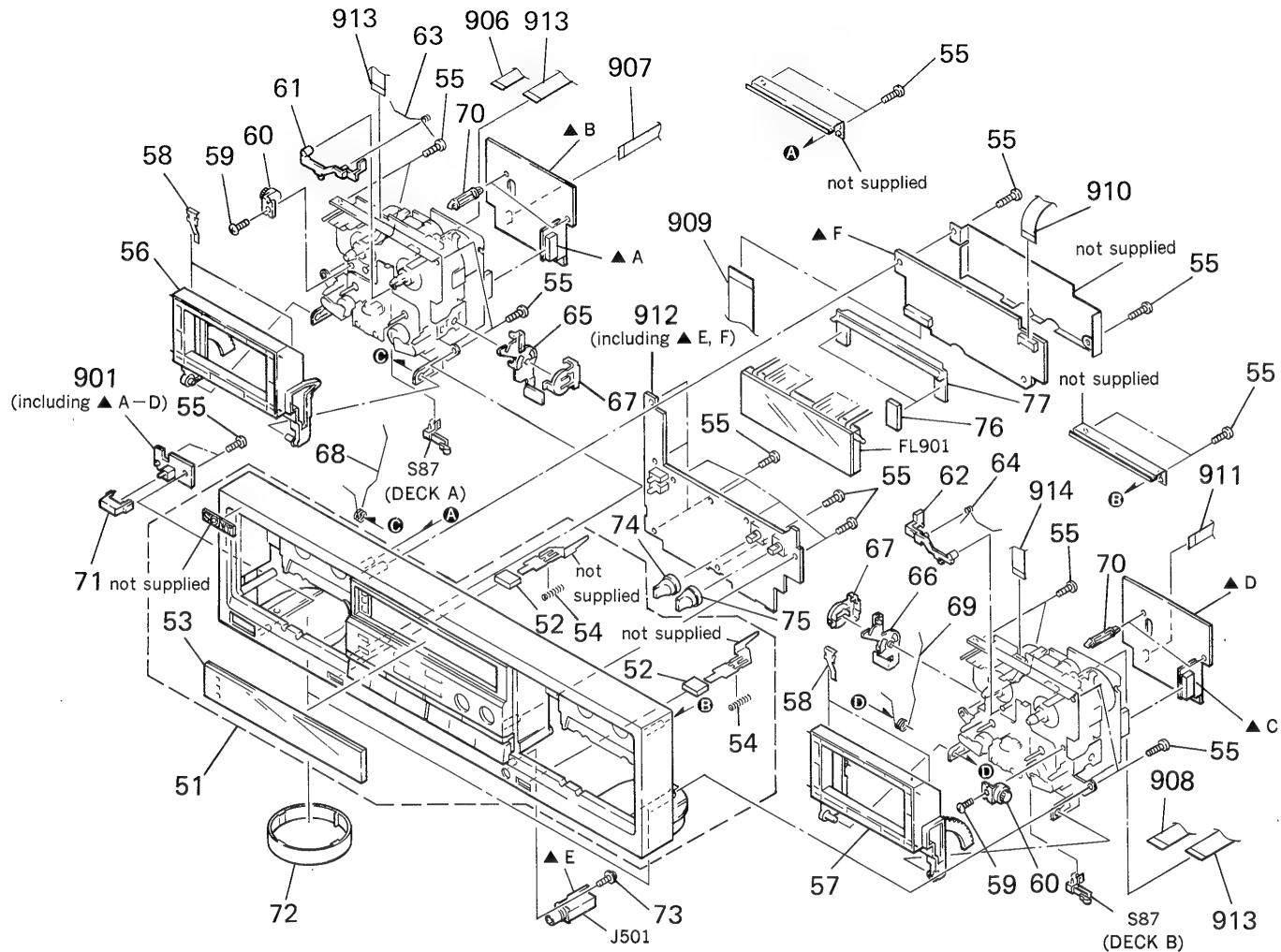
Les composants identifiés par une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. CHASSIS SECTION



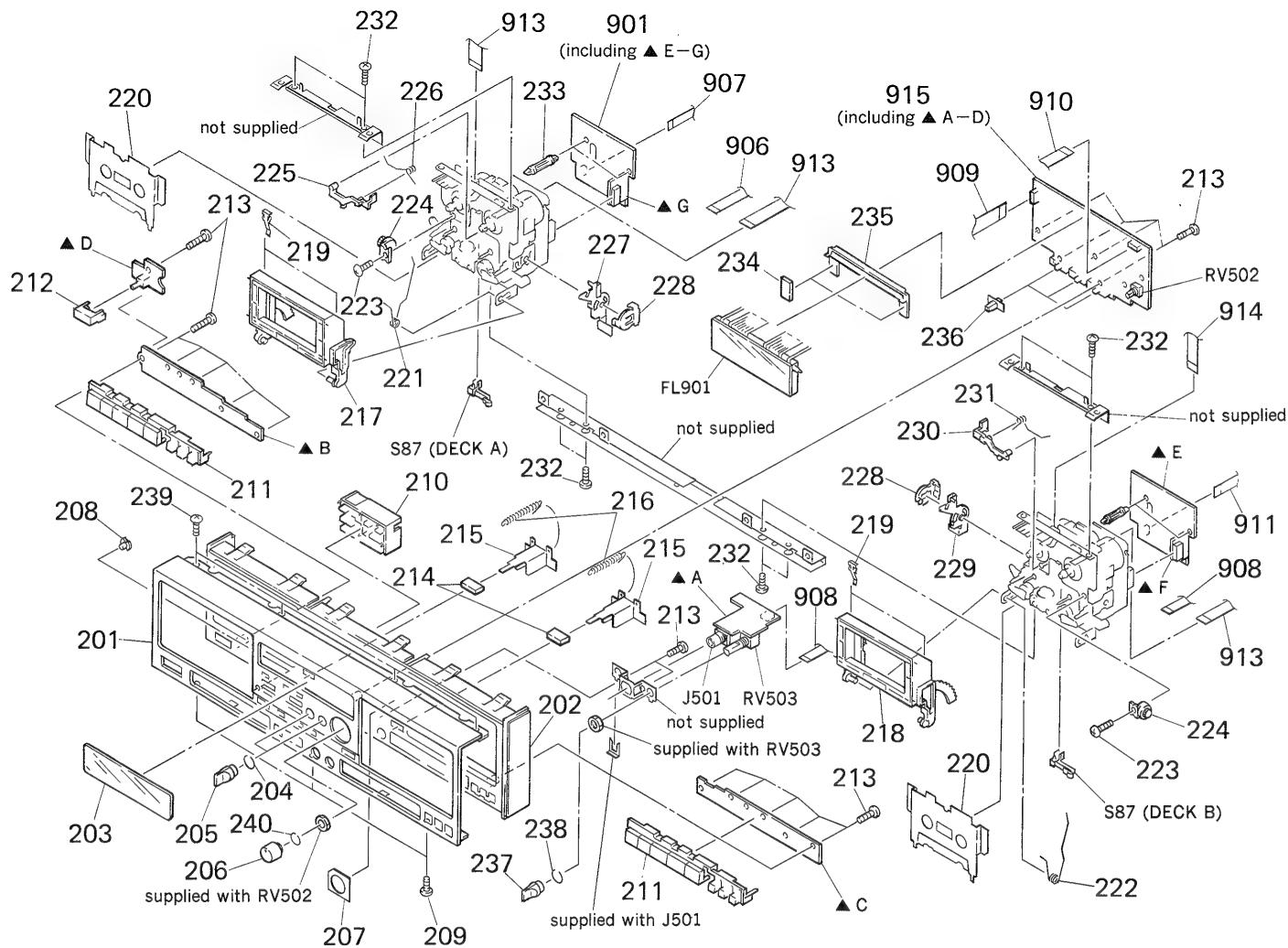
Ref.No	Part No.	Description	Remarks	Ref.No	Part No.	Description	Remarks
1	X-3346-323-1	(WR720)....LID (A) ASSY, CASSETTE		18	7-685-534-19	(E)....SCREW +BTP 2.6X8 TYPE2 N-S	
1	X-3362-043-1	(WR720A)....LID (A) ASSY, CASSETTE		19	*3-701-947-13	(AEP, WG, E)....LABEL (T1.6A), FUSE	
2	X-3346-324-1	(WR720)....LID (B) ASSY, CASSETTE		901	*A-2006-254-A	(WR720A)....MOUNTED PCB, AUDIO SYSTEM CONTROL	
2	X-3362-044-1	(WR720A)....LID (B) ASSY, CASSETTE		901	*A-2006-258-A	(WR720)....MOUNTED PCB, AUDIO SYSTEM CONTROL	
3	7-682-548-09	SCREW +BVTT 3X8 (S)		902	*1-533-213-31	HOLDER, FUSE	
4	*4-929-294-42	CASE		903	*1-551-188-XX	(E)....CORD, POWER	
5	3-704-366-01	SCREW (CASE) (M3X8)		904	*1-551-506-XX	(US, Canadian)....CORD, POWER	
6	*3-337-136-11	COVER, TRANSFORMER SAFETY		905	*1-555-795-00	(AEP, WG)....CORD, POWER, EULO PLUG	
7	*3-346-265-11	HOLDER, PC BOARD		F701	*1-532-259-00	(AEP, WG, E)....FUSE, TIME-LAG (T1.6A/250V)	
8	*3-354-920-31	(WR720)....PANEL, BACK		F701	*1-532-742-11	(US, Canadian)....FUSE, GLASS TUBE (1.6A/125V)	
8	*3-354-947-01	(US, Canadian)....PANEL, BACK		F702	*1-532-259-00	(AEP, WG, E)....FUSE, TIME-LAG (T1.6A/250V)	
8	*3-354-947-21	(E)....PANEL, BACK		F702	*1-532-742-11	(US, Canadian)....FUSE, GLASS TUBE (1.6A/125V)	
9	*3-703-571-11	(WR720A)....BUSHING (S) (4516), CORD		IC805	8-759-207-05	IC TA7272P	
10	7-621-849-00	SCREW, TAPPING		Q707	8-729-920-98	TRANSISTOR 2SD1761-EF	
11	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3		S702	*1-570-307-11	(E)....SWITCH, VOLTAGE CHANGE (VOLTAGE SELECTOR)	
12	4-363-147-00	HEAT SINK, H.PIN		T701	*1-450-147-11	(US, Canadian)....TRANSFORMER, POWER	
13	X-3304-938-2	(AEP, WG, E)....FOOT ASSY	14	T701	*1-450-148-11	(AEP, WG)....TRANSFORMER, POWER	
13	X-4885-950-1	(US, Canadian)....FOOT ASSY	14	T701	*1-450-191-11	(E)....TRANSFORMER, POWER	
14	4-923-836-11	CUSHION					
15	7-682-547-04	SCREW +BVTT 3X6					
16	3-703-244-00	(WR720)....BUSHING (2104), CORD					
17	7-682-547-09	SCREW +RVTT 3X6					

6-2. FRONT PANEL SECTION (WR720A)



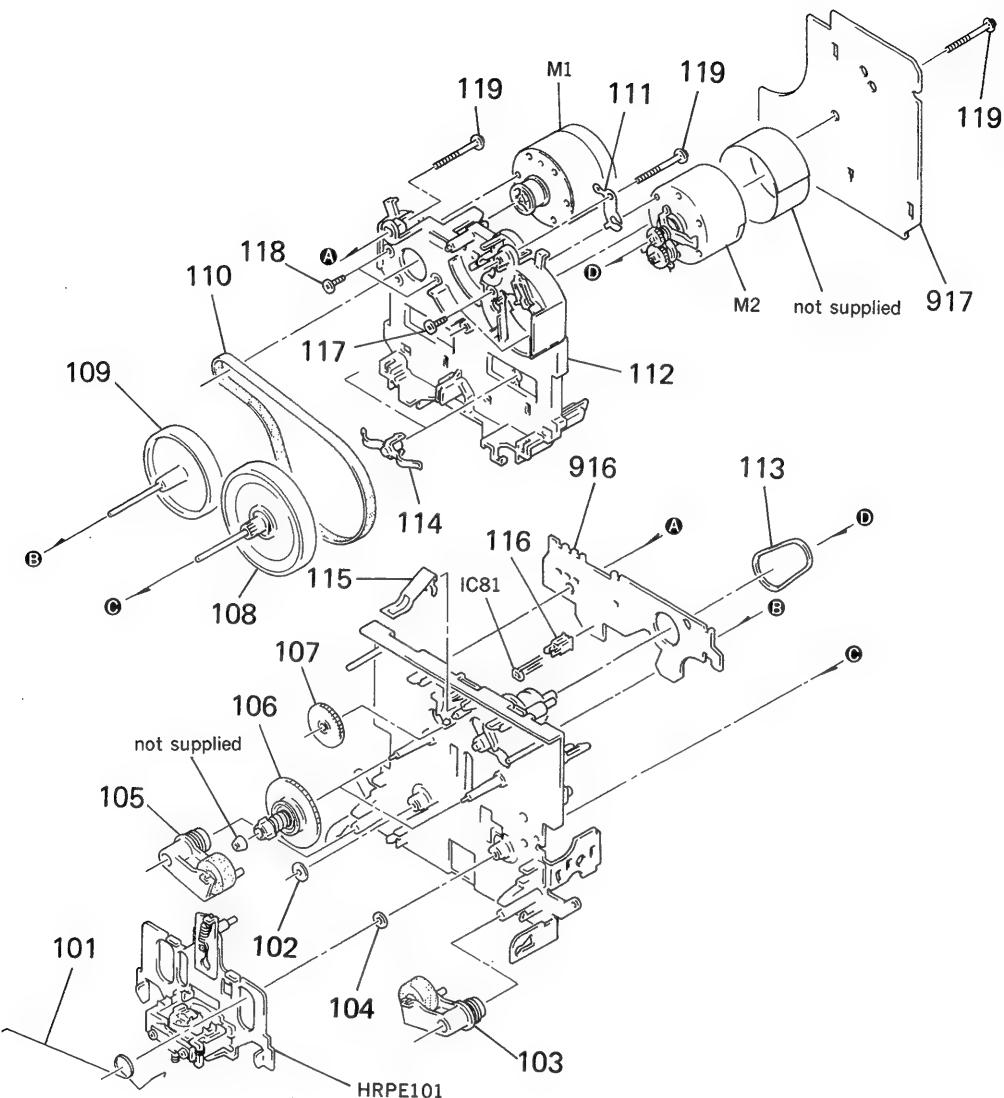
Ref.No	Part No.	Description	Remarks	Ref.No	Part No.	Description	Remarks
51	X-3346-310-1	(US, Canadian)....PANEL ASSY, FRONT	52-54	70	* 3-682-419-21	HOLDER, P.C.B	
51	X-3346-322-1	(E)....PANEL ASSY, FRONT	52-54	71	3-354-932-01	BUTTON (POWER)	
52	3-340-188-11	BUTTON (EJECT)		72	* 4-933-135-01	RING (DIA. 58A), ORNAMENTAL	
53	3-359-922-01	(US, Canadian)....WINDOW (METER)		73	7-685-134-19	SCREW (+ PTPWH)(2.6X8)	
53	3-359-922-11	(E)....WINDOW (METER)		74	3-359-926-01	KNOB (RT-90)	
54	3-500-131-00	SPRING, COMPRESSION		75	3-359-926-11	KNOB (RT-90)	
55	4-928-635-01	SCREW, +BV (2.6X8) TAPPING		76	9-911-844-XX	CUSHION	
56	X-3340-195-1	HOLDER (R) ASSY, CASSETTE	58	77	4-925-125-01	HOLDER, FL TUBE	
57	X-3340-194-1	HOLDER (L) ASSY, CASSETTE	58	901	* A-2006-254-A	MOUNTED PCB, AUDIO SYSTEM CONTROL	
58	3-308-823-11	SPRING		906	* 1-575-847-11	WIRE, FLAT TYPE (5 CORE)	
59	7-621-773-95	SCREW +BVTT 2.6X6 (S)		907	* 1-575-851-11	WIRE, FLAT TYPE (7 CORE)	
60	3-354-963-01	DAMPER		908	* 1-575-848-11	WIRE, FLAT TYPE (5 CORE)	
61	3-354-956-01	LEVER (EJECT SAFETY LEVER R)		909	* 1-575-853-11	WIRE, FLAT TYPE (15 CORE)	
62	3-354-955-01	LEVER (EJECT SAFETY LEVER L)		910	1-534-517-00	WIRE, FLAT TYPE (11 CORE)	
63	3-354-962-01	SPRING (EJECT SAFETY SPRING R)		911	* 1-575-780-11	WIRE, FLAT TYPE (7 CORE)	
64	3-354-961-01	SPRING (EJECT SAFETY SPRING L)		912	* A-2006-255-A	MOUNTED PCB, PANEL	
65	* 3-354-954-01	LEVER (LOCK LEVER R)		913	* 1-575-850-11	WIRE, FLAT TYPE (9 CORE)	
66	* 3-354-953-01	LEVER (LOCK LEVER L)		914	* 1-575-781-11	WIRE, FLAT TYPE (9 CORE)	
67	3-354-957-01	JOINT (LOCK LEVER)		FL901	1-519-593-11	INDICATOR TUBE, FLUORESCENT	
68	3-354-960-01	SPRING (LOADING R), TORSION		J501	1-507-796-71	JACK (PHONES)	
69	3-354-959-01	SPRING (LOADING L), TORSION		S87	1-572-393-11	SWITCH, LEAF (DIRECTION)	

6-3. FRONT PANEL SECTION (WR720)



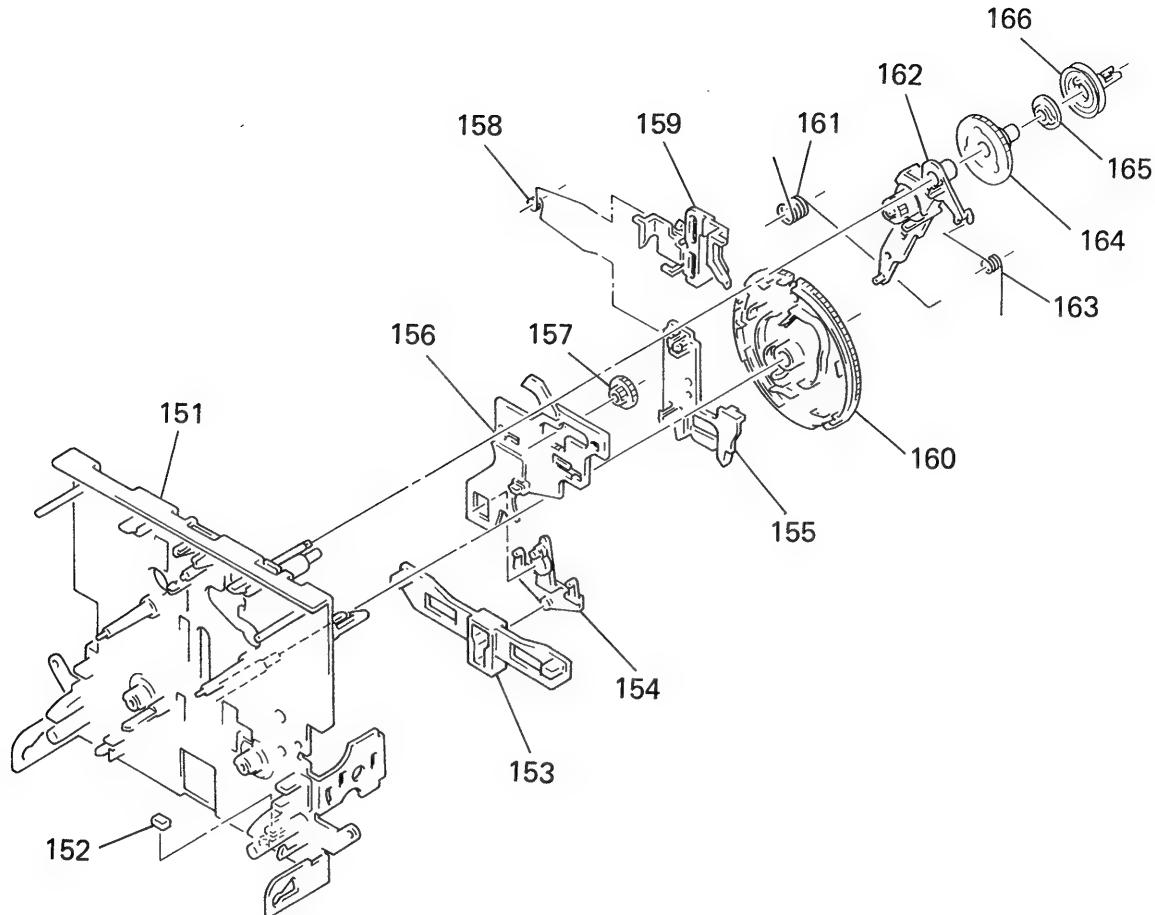
Ref.No	Part No.	Description	Remarks	Ref.No	Part No.	Description	Remarks
201	3-354-939-51	PANEL, FRONT		229	* 3-354-953-01	LEVER (LOCK LEVER L)	
202	3-354-916-12	PANEL (BASE)		230	3-354-955-01	LEVER (EJECT SAFETY LEVER L)	
203	3-354-933-12	WINDOW (METER)		231	3-354-961-01	SPRING (EJECT SAFETY SPRING L)	
204	3-354-981-01	SPRING (SUS), RING		232	7-621-770-67	SCREW +BVTT 2.6X6 (S)	
205	3-354-931-11	KNOB (DIA. 10)		233	* 3-682-419-21	HOLDER, P.C.B	
206	3-359-932-01	KNOB (REC LEVEL)		234	9-911-844-XX	CUSHION	
207	3-354-923-01	PLATE (VOL), ORNAMENTAL		235	4-925-125-01	HOLDER, FL TUBE	
208	3-354-924-01	PLATE, INDICATION		236	4-922-518-01	KNOB (TIMER)	
209	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S		237	3-354-931-01	KNOB (DIA. 10)	
210	3-354-938-01	BUTTON (B)		238	3-356-935-01	SPRING	
211	3-354-937-01	BUTTON (A)		239	7-682-547-04	SCREW +BVTT 3X6	
212	3-354-932-01	BUTTON (POWER)		240	* 3-362-235-01	SPRING (REC LEVEL), RING	
213	4-928-635-01	SCREW, +BV (2.6X8) TAPPING		901	* A-2006-258-A	MOUNTED PCB, AUDIO SYSTEM CONTROL	
214	3-359-907-01	BUTTON (EJECT)		906	* 1-575-847-11	WIRE, FLAT TYPE (5 CORE)	
215	* 3-359-935-01	LEVER (EJECT)		907	* 1-575-851-11	WIRE, FLAT TYPE (7 CORE)	
216	3-362-234-01	SPRING, TENSION		908	* 1-575-848-11	WIRE, FLAT TYPE (5 CORE)	
217	X-3340-195-1	HOLDER (R) ASSY, CASSETTE	219	909	* 1-575-853-11	WIRE, FLAT TYPE (15 CORE)	
218	X-3340-194-1	HOLDER (L) ASSY, CASSETTE	219	910	1-534-517-00	WIRE, FLAT TYPE (11 CORE)	
219	3-308-823-11	SPRING		911	* 1-575-780-11	WIRE, FLAT TYPE (7 CORE)	
220	X-3346-313-1	RETAINER ASSY, CASSETTE		913	* 1-575-850-11	WIRE, FLAT TYPE (9 CORE)	
221	3-354-960-01	SPRING (LOADING R), TORSION		914	* 1-575-781-11	WIRE, FLAT TYPE (9 CORE)	
222	3-354-959-01	SPRING (LOADING L), TORSION		915	* A-2006-259-A	MOUNTED, PCB, PANEL	
223	7-621-773-95	SCREW +BVTT 2.6X6 (S)		FL901	1-519-593-11	INDICATOR TUBE, FLUORESCENT	
224	3-354-963-01	DAMPER		J501	1-507-796-71	JACK (PHONES)	
225	3-354-956-01	LEVER (EJECT SAFETY LEVER R)		RV502	1-241-133-11	RES, VAR, CARBON 50K/50K (REC LEVEL)	
226	3-354-962-01	SPRING (EJECT SAFETY SPRING R)		RV503	1-238-085-11	RES, VAR, CARBON 20K/20K (PHONES LEVEL)	
227	* 3-354-954-01	LEVER (LOCK LEVER R)		S87	1-572-393-11	SWITCH, LEAF (DIRECTION)	
228	3-354-957-01	JOINT (LOCK LEVER)					

6-4. MECHANISM SECTION-1
(DECK A, B : TCM-190RB12)



Ref.No	Part No.	Description	Remarks	Ref.No	Part No.	Description	Remarks
101	3-359-455-01	SPRING, TORSION		114	3-575-321-00	RETAINER, THRUST, CAPSTAN	
102	3-356-714-01	WASHER		115	3-359-430-01	SPRING(CASSETTE RETAINER),LEAF	
103	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY		116	3-343-419-01	HOLDER (S SENSER A)	
104	3-356-713-01	WASHER		117	7-627-556-08	SCREW +P 2.6X2.8	
105	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY		118	7-621-775-00	SCREW +B 2.6X3	
106	X-3359-404-1	TABLE ASSY, REEL		119	3-359-414-01	SCREW (+PTPWH 2X23)	
107	3-359-424-01	GEAR (REV GEAR)		916	*1-634-841-11	PC BOARD, SW-A	
108	X-3359-406-1	FLYWHEEL (FWD) COMPLETE ASSY		917	*1-634-842-11	PC BOARD, MD (C)	
109	X-3359-410-1	FLYWHEEL (REV) ASSY		IC81	8-719-939-23	PHOTO REFLECTOR GP-2S09-C	
110	3-359-417-01	BELT (FLAT), CAPSTAN		HRPE101	A-2003-477-A	BASE ASSY, HEAD (REC/PB/ERASE)	
111	3-359-450-01	PLATE, GROUND		M1	X-3359-417-1	MOTOR ASSY (CAPSTAN)	
112	*3-359-436-01	BASE (THRUST RETAINER),FITTING		M2	A-2003-474-A	MOTOR (REEL MOTOR) ASSY	
113	3-359-466-01	BELT (FR), SQUARE					

6-5. MECHASISM SECTION-2
(DECK A, B : TCM-190RB12)



Ref.No	Part No.	Description	Remarks	Ref.No	Part No.	Description	Remarks
151	X-3359-415-1	CHASSIS ASSY, MECHANICAL		159	3-359-429-01	SLIDER (BRAKE PLATE)	
152	* 3-359-469-01	SPACER		160	3-359-420-01	GEAR (CAM GEAR)	
153	* 3-359-425-01	SLIDER (REVERSE SLIDER)		161	3-359-456-01	SPRING (TRIGGER SPRING), TORSION	
154	3-359-426-01	LEVER (REVERSE LEVER)		162	X-3359-405-1	LEVER (FR ARM) ASSY	
155	* 3-359-427-01	SLIDER (REVERSE SLIDER)		163	3-359-453-01	SPRING (FR ARM), TORSION	
156	* 3-359-415-01	SLIDER (TRIGGER SLIDER)		164	3-359-419-01	GEAR (FR GEAR)	
157	3-359-448-01	GEAR (TRIGGER)		165	3-359-421-01	CLUTCH (REEL DISK)	
158	3-359-454-01	SPRING, TORSION		166	3-359-418-01	PULLEY (FR PULLEY)	

SECTION 7

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked “★” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: $\mu\mu$ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORS

In each case, U: μ , for example:
 UA...: μ A..., UPA...: μ PA...,
 UPC...: μ PC, UPD...: μ PD...

The components identified by mark  or dotted line with mark  are critical for safety.
 Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité.
 Ne les remplacer que par une pièce portant le numéro spécifié.

- WG... West Germany model.

Ref.No	Part No.	Description			
901	*A-2006-254-A	(WR720A)....MOUNTED PCB, AUDIO SYSTEM			
	CONTROL				
901	*A-2006-258-A	(WR720)....MOUNTED PCB, AUDIO SYSTEM			
	CONTROL				
902	*1-533-213-31	HOLDER, FUSE			
903	 1-551-188-XX	(E)....CORD, POWER			
904	 1-551-506-XX	(US, Canadian)....CORD, POWER			
905	 1-555-795-00	(AEP, WG)....CORD, POWER, EULO PLUG			
906	*1-575-847-11	WIRE, FLAT TYPE (5 CORE)			
907	*1-575-851-11	WIRE, FLAT TYPE (7 CORE)			
908	*1-575-848-11	WIRE, FLAT TYPE (5 CORE)			
909	*1-575-853-11	WIRE, FLAT TYPE (15 CORE)			
910	1-534-517-00	WIRE, FLAT TYPE (11 CORE)			
911	*1-575-780-11	WIRE, FLAT TYPE (7 CORE)			
912	*A-2006-255-A	(WR720A)....MOUNTED PCB, PANEL			
913	*1-575-850-11	WIRE, FLAT TYPE (9 CORE)			
914	*1-575-781-11	WIRE, FLAT TYPE (9 CORE)			
915	*A-2006-259-A	(WR720)....MOUNTED, PCB, PANEL			
916	*1-634-841-11	PC BOARD, SW-A			
917	*1-634-842-11	PC BOARD, MD (C)			

CAPACITOR

C11	1-110-342-11	MYLAR	390PF	5%	50V
C12	1-136-157-00	FILM	0.022MF	5%	50V
C13	1-124-282-00	ELECT	22MF	20%	25V
C21	1-110-342-11	MYLAR	390PF	5%	50V
C22	1-136-157-00	FILM	0.022MF	5%	50V
C23	1-124-282-00	ELECT	22MF	20%	25V
C31	1-124-443-00	ELECT	100MF	20%	10V
C32	1-124-443-00	ELECT	100MF	20%	10V
C33	1-124-119-00	ELECT	330MF	20%	16V
C51	1-136-230-00	FILM	0.0022MF	5%	100V
C52	1-136-230-00	FILM	0.0022MF	5%	100V
C53	1-130-856-00	FILM	0.0068MF	5%	100V
C54	1-136-601-11	FILM	0.01MF	5%	630V
C55	1-161-494-00	CERAMIC	0.022MF		25V
C56	1-126-157-11	ELECT	10MF	20%	16V
C71	1-123-875-11	ELECT	10MF	20%	50V
C72	1-123-875-11	ELECT	10MF	20%	50V
C101	1-136-157-00	FILM	0.022MF	5%	50V
C102	1-162-294-31	CERAMIC	0.001MF	10%	50V
C103	1-161-375-00	(WR720)....CERAMIC	0.0022MF	20%	16V
C104	1-130-475-00	MYLAR	0.0022MF	5%	50V
C105	1-130-475-00	MYLAR	0.0022MF	5%	50V
C106	1-136-174-00	FILM	0.56MF	5%	50V
C107	1-136-171-00	FILM	0.33MF	5%	50V
C108	1-123-875-11	ELECT	10MF	20%	50V
C109	1-124-446-11	ELECT	47MF	20%	10V
C110	1-123-875-11	ELECT	10MF	20%	50V
C111	1-124-791-11	ELECT	1MF	20%	50V
C121	1-123-875-11	ELECT	10MF	20%	50V
C122	1-123-875-11	ELECT	10MF	20%	50V
C124	1-124-902-00	ELECT	0.47MF	20%	50V
C131	1-123-382-00	ELECT	3.3MF	20%	50V
C151	1-123-875-11	ELECT	10MF	20%	50V

Ref.No	Part No.	Description			
C152	1-123-875-11	ELECT	10MF	20%	50V
C154	1-124-902-00	ELECT	0.47MF	20%	50V
C181	1-126-096-11	(WR720)....ELECT	10MF	20%	25V
C201	1-136-157-00	FILM	0.022MF	5%	50V
C202	1-162-294-31	CERAMIC	0.001MF	10%	50V
C203	1-161-375-00	(WR720)....CERAMIC	0.0022MF	20%	16V
C204	1-130-475-00	MYLAR	0.0022MF	5%	50V
C205	1-130-475-00	MYLAR	0.0022MF	5%	50V
C206	1-136-174-00	FILM	0.56MF	5%	50V
C207	1-136-171-00	FILM	0.33MF	5%	50V
C208	1-123-875-11	ELECT	10MF	20%	50V
C209	1-124-446-11	ELECT	47MF	20%	10V
C210	1-123-875-11	ELECT	10MF	20%	50V
C211	1-124-791-11	ELECT	1MF	20%	50V
C221	1-123-875-11	ELECT	10MF	20%	50V
C222	1-123-875-11	ELECT	10MF	20%	50V
C224	1-124-902-00	ELECT	0.47MF	20%	50V
C231	1-123-382-00	ELECT	3.3MF	20%	50V
C251	1-123-875-11	ELECT	10MF	20%	50V
C252	1-123-875-11	ELECT	10MF	20%	50V
C254	1-124-902-00	ELECT	0.47MF	20%	50V
C281	1-126-096-11	(WR720)....ELECT	10MF	20%	25V
C391	1-136-273-91	FILM	75PF	5%	630V
C392	1-162-288-31	CERAMIC	330PF	10%	50V
C393	1-130-472-00	MYLAR	0.0012MF	5%	50V
C394	1-136-433-11	FILM	100PF	5%	630V
C395	1-136-437-11	FILM	220PF	5%	630V
C396	1-136-165-00	FILM	0.1MF	5%	50V
C397	1-136-157-00	FILM	0.022MF	5%	50V
C398	1-136-153-00	FILM	0.01MF	5%	50V
C491	1-136-273-91	FILM	75PF	5%	630V
C492	1-162-288-31	CERAMIC	330PF	10%	50V
C493	1-130-472-00	MYLAR	0.0012MF	5%	50V
C494	1-136-433-11	FILM	100PF	5%	630V
C495	1-136-437-11	FILM	220PF	5%	630V
C496	1-136-165-00	FILM	0.1MF	5%	50V
C497	1-136-157-00	FILM	0.022MF	5%	50V
C498	1-136-153-00	FILM	0.01MF	5%	50V
C506	1-124-791-11	ELECT	1MF	20%	50V
C542	1-124-925-11	ELECT	2.2MF	20%	50V
C591	1-124-473-11	ELECT	1000MF	20%	10V
C592	1-124-589-11	(WR720)....ELECT	47MF	20%	16V
C593	1-124-589-11	(WR720)....ELECT	47MF	20%	16V
C599	1-124-925-11	ELECT	2.2MF	20%	50V
C601	1-124-925-11	ELECT	2.2MF	20%	50V
C602	1-162-286-31	CERAMIC	220PF	10%	50V
C603	1-162-286-31	CERAMIC	220PF	10%	50V
C604	1-124-925-11	ELECT	2.2MF	20%	50V
C605	1-136-157-00	FILM	0.022MF	5%	50V
C608	1-124-925-11	ELECT	2.2MF	20%	50V
C691	1-107-046-00	MICA	4.7PF	0.5PF	500V
C692	1-124-446-11	ELECT	47MF	20%	10V
C693	1-126-101-11	ELECT	100MF	20%	16V
C694	1-124-902-00	ELECT	0.47MF	20%	50V
C701	1-124-443-00	ELECT	100MF	20%	6.3V

Ref.No	Part No.	Description				
C702	1-124-122-11	ELECT	100MF	20%	35V	
C703	1-124-925-11	ELECT	2.2MF	20%	50V	
C704	1-124-911-11	ELECT	220MF	20%	50V	
C705	1-124-927-11	ELECT	4.7MF	20%	50V	
C707	1-124-925-11	ELECT	2.2MF	20%	50V	
C708	1-124-564-11	ELECT	4700MF	20%	25V	
C709	1-124-446-11	ELECT	47MF	20%	10V	
C710	1-124-473-11	ELECT	1000MF	20%	10V	
C711	1-124-473-11	ELECT	1000MF	20%	10V	
C712	1-126-946-11	ELECT	6800MF	20%	25V	
C713	1-161-494-00	CERAMIC	0.022MF		25V	
C801	1-124-443-00	ELECT	100MF	20%	6.3V	
C802	1-164-159-11	CERAMIC	0.1MF		50V	
C803	1-162-306-11	CERAMIC	0.01MF	20%	16V	
C804	1-124-443-00	ELECT	100MF	20%	6.3V	
C805	1-124-925-11	ELECT	2.2MF	20%	50V	
C806	1-136-165-00	FILM	0.1MF	5%	50V	
C807	1-136-165-00	FILM	0.1MF	5%	50V	
C851	1-124-902-00	ELECT	0.47MF	20%	50V	
C861	1-162-294-31	CERAMIC	0.001MF	10%	50V	
C901	1-164-159-11	CERAMIC	0.1MF		50V	
C902	1-124-443-00	(WR720A)....ELECT	100MF	20%	6.3V	
C902	1-126-154-11	(WR720)....ELECT	47MF	20%	6.3V	
C904	1-162-306-11	(WR720)....CERAMIC	0.01MF	20%	16V	
C904	1-164-159-11	(WR720A)....CERAMIC	0.1MF		50V	
C905	1-124-927-11	(WR720)....ELECT	4.7MF	20%	50V	
C0391	1-136-273-91	FILM	75PF	5%	630V	
C0392	1-162-288-31	CERAMIC	330PF	10%	50V	
C0393	1-130-472-00	MYLAR	0.0012MF	5%	50V	
C0394	1-136-433-11	FILM	100PF	5%	630V	
C0395	1-136-437-11	FILM	220PF	5%	630V	
C0396	1-136-165-00	FILM	0.1MF	5%	50V	
C0397	1-136-157-00	FILM	0.022MF	5%	50V	
C0398	1-136-153-00	FILM	0.01MF	5%	50V	
C0491	1-136-273-91	FILM	75PF	5%	630V	
C0492	1-162-288-31	CERAMIC	330PF	10%	50V	
C0493	1-130-472-00	MYLAR	0.0012MF	5%	50V	
C0494	1-136-433-11	FILM	100PF	5%	630V	
C0495	1-136-437-11	FILM	220PF	5%	630V	
C0496	1-136-165-00	FILM	0.1MF	5%	50V	
C0497	1-136-157-00	FILM	0.022MF	5%	50V	
C0498	1-136-153-00	FILM	0.01MF	5%	50V	
C0691	1-107-046-00	MICA	4.7PF	0.5PF	500V	
C0692	1-124-446-11	ELECT	47MF	20%	10V	
C0693	1-126-101-11	ELECT	100MF	20%	16V	
C0694	1-124-902-00	ELECT	0.47MF	20%	50V	
CN501	* 1-568-824-11	SOCKET, CONNECTOR 5P				
CN502	* 1-568-824-11	SOCKET, CONNECTOR 5P				
CN503	* 1-568-826-11	SOCKET, CONNECTOR 7P				
CN504	* 1-568-826-11	SOCKET, CONNECTOR 7P				
CN505	* 1-564-337-00	(WR720A)....PIN, CONNECTOR 3P				
CN505	* 1-564-824-11	(WR720)....SOCKET, CONNECTOR 5P				
CN506	* 1-568-848-11	(WR720)....SOCKET, CONNECTOR 5P				
CN601	* 1-564-509-11	PLUG, CONNECTOR 6P				
CN691	* 1-568-826-11	SOCKET, CONNECTOR 7P				
CN701	* 1-564-338-00	(WR720)....PIN, CONNECTOR 4P				
CN701	* 1-564-339-00	(WR720A)....PIN, CONNECTOR 5P				
CN703	* 1-564-510-11	PLUG, CONNECTOR 7P				
CN801	* 1-568-830-11	SOCKET, CONNECTOR 11P				
CN802	* 1-568-828-11	SOCKET, CONNECTOR 9P				
CN803	* 1-568-828-11	SOCKET, CONNECTOR 9P				
CN804	* 1-568-828-11	SOCKET, CONNECTOR 9P				
CN805	* 1-568-828-11	SOCKET, CONNECTOR 9P				
CN806	* 1-568-834-11	SOCKET, CONNECTOR 15P				

Ref.No	Part No.	Description
CN901	* 1-568-834-11	(WR720)....SOCKET, CONNECTOR 15P
CN901	* 1-568-858-11	(WR720A)....SOCKET, CONNECTOR 15P
CN902	* 1-568-830-11	(WR720)....SOCKET, CONNECTOR 11P
CN902	* 1-568-854-11	(WR720A)....SOCKET, CONNECTOR 11P
CN904	* 1-564-498-11	(WR720)....PIN, CONNECTOR 5P
CN905	* 1-564-498-11	(WR720)....PIN, CONNECTOR 5P
CN906	* 1-564-498-11	(WR720)....PIN, CONNECTOR 5P
CN0691	* 1-568-826-11	SOCKET, CONNECTOR 7P
CNP31	* 1-568-824-11	SOCKET, CONNECTOR 5P
CNP32	* 1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P
CNP34	* 1-565-344-11	PIN, CONNECTOR (PC BOARD) 8P
CNP35	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P
CNP71	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P
CNP72	* 1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P
CNP73	* 1-568-828-11	SOCKET, CONNECTOR 9P
CNP75	* 1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P
CNP81	* 1-568-852-11	SOCKET, CONNECTOR 9P
CNP691	* 1-565-347-11	SOCKET, CONNECTOR (PC BOARD) 8P
CNP0691	* 1-565-347-11	SOCKET, CONNECTOR (PC BOARD) 8P
CP901	1-233-125-11	(WR720)....COMPOSITION CIRCUIT BLOCK (10KX4)
CP901	1-233-219-11	(WR720A)....COMPOSITION CIRCUIT BLOCK
CP902	1-233-125-11	(WR720)....COMPOSITION CIRCUIT BLOCK (10KX4)
CP902	1-233-136-11	(WR720A)....COMPOSITION CIRCUIT BLOCK (10KX8)
CP903	1-233-219-11	(WR720)....COMPOSITION CIRCUIT BLOCK
D31	8-719-107-94	DIODE 1SS202-1
D131	8-719-107-94	DIODE 1SS202-1
D231	8-719-107-94	DIODE 1SS202-1
D501	8-719-107-94	(WR720)....DIODE 1SS202-1
D502	8-719-107-94	DIODE 1SS202-1
D503	8-719-933-54	DIODE HZS9A2L
D571	8-719-107-94	DIODE 1SS202-1
D572	8-719-001-36	DIODE UZL-11L2
D601	8-719-107-94	DIODE 1SS202-1
D602	8-719-107-94	DIODE 1SS202-1
D701	8-719-000-78	DIODE UZL-7L2
D702	8-719-107-94	DIODE 1SS202-1
D703	8-719-200-77	DIODE 10E2N
D704	8-719-200-77	DIODE 10E2N
D705	8-719-200-77	DIODE 10E2N
D706	8-719-107-94	DIODE 1SS202-1
D707	8-719-200-77	DIODE 10E2N
D708	8-719-200-77	DIODE 10E2N
D709	8-719-933-33	DIODE HZS6A1L
D710	8-719-200-77	DIODE 10E2N
D711	8-719-200-77	DIODE 10E2N
D712	8-719-933-33	DIODE HZS6A1L
D713	8-719-000-93	DIODE UZL-7H1
D801	8-719-107-94	DIODE 1SS202-1
D811	8-719-107-94	DIODE 1SS202-1
D812	8-719-107-94	DIODE 1SS202-1
D902	8-719-301-39	DIODE SEL2210S
F701	▲ 1-532-259-00	(AEP, WG, E)....FUSE, TIME-LAG (T1.6A/250V)
F701	▲ 1-532-742-11	(US, Canadian)....FUSE, GLASS TUBE (1.6A/125V)
F702	▲ 1-532-259-00	(AEP, WG, E)....FUSE, TIME-LAG (T1.6A/250V)
F702	▲ 1-532-742-11	(US, Canadian)....FUSE, GLASS TUBE (1.6A/125V)
FL901	1-519-593-11	INDICATOR TUBE, FLUORESCENT
HRPE101	A-2003-477-A	BASE ASSY, HEAD (REC/PB/ERASE)
IC31	8-759-111-44	IC UPC4570C-1
IC81	8-719-939-23	PHOTO REFLECTOR GP-2S09-C
IC501	8-752-036-34	IC CXA1330S
IC503	8-759-945-58	IC RC4558P
IC504	8-759-945-58	IC RC4558P

Note:
The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	Part No.	Description	Ref.No	Part No.	Description			
IC506	8-759-040-53	IC MC14053BCP	Q804	8-729-900-80	TRANSISTOR 2SC3402-TP			
IC509	8-752-038-02	IC CXA1198AP	Q805	8-729-900-61	TRANSISTOR DTA114ES			
IC510	8-759-208-06	IC MC14051BCP	Q806	8-729-900-61	TRANSISTOR DTA114ES			
IC551	8-752-038-02	IC CXA1198AP	Q807	8-729-821-04	TRANSISTOR 2SA1317-STU			
IC601	8-759-634-50	(WR720)....IC M5218AL	Q851	8-729-900-61	TRANSISTOR DTA114ES			
IC601	8-759-634-51	(WR720A)....IC M5218AP	Q852	8-729-900-89	TRANSISTOR DTC144ES			
IC691	8-759-106-56	IC UPC1297CA	Q853	8-729-900-61	TRANSISTOR DTA114ES			
IC701	8-759-945-58	IC RC4558P	Q854	8-729-900-89	TRANSISTOR DTC144ES			
IC802	8-759-634-83	IC M50925-446SP	Q891	8-729-900-61	TRANSISTOR DTA114ES			
IC803	8-759-634-84	IC M50255P	Q901	8-729-900-65	TRANSISTOR DTA144ES			
IC804	8-759-240-50	IC MC14050BCP	Q902	8-729-620-05	TRANSISTOR 2SC2603-EF			
IC805	8-759-207-05	IC TA7272P	Q903	8-729-620-05	TRANSISTOR 2SC2603-EF			
IC806	8-759-208-08	IC MC14052BCP	Q904	8-729-900-74	TRANSISTOR DTC143TS			
IC807	8-759-208-08	IC MC14052BCP	Q905	8-729-620-05	(WR720)....TRANSISTOR 2SC2603-EF			
IC901	8-759-634-68	IC M50941-358SP	Q906	8-729-620-05	(WR720)....TRANSISTOR 2SC2603-EF			
IC902	8-741-100-48	IC SBX1610-59	Q907	8-729-620-05	(WR720)....TRANSISTOR 2SC2603-EF			
IC0691	8-759-106-56	IC UPC1297CA	Q908	8-729-620-05	(WR720)....TRANSISTOR 2SC2603-EF			
J301	1-565-258-11	JACK, PIN 4P (LINE IN/OUT)			<u>RESISTOR</u>			
J501	1-507-796-71	JACK (PHONES)	R11	1-247-881-00	CARBON	120K	5%	1/4W
L391	1-410-780-11	INDUCTOR	R12	1-249-405-11	CARBON	100	5%	1/4W
L491	1-410-780-11	INDUCTOR	R13	1-247-882-11	CARBON	130K	5%	1/4W
L0391	1-410-780-11	INDUCTOR	R14	1-249-426-11	CARBON	5.6K	5%	1/4W
L0491	1-410-780-11	INDUCTOR	R21	1-247-881-00	CARBON	120K	5%	1/4W
LPF101	1-235-980-11	(WR720)....FILTER, LOW PASS	R22	1-249-405-11	CARBON	100	5%	1/4W
LPF101	1-236-087-11	(WR720A)....FILTER, LOW PASS	R23	1-247-882-11	CARBON	130K	5%	1/4W
LPF201	1-235-980-11	(WR720)....FILTER, LOW PASS	R24	1-249-426-11	CARBON	5.6K	5%	1/4W
LPF201	1-236-087-11	(WR720A)....FILTER, LOW PASS	R31	1-249-409-11	CARBON	220	5%	1/4W
M1	X-3359-417-1	MOTOR ASSY (CAPASTAN)	R32	1-249-409-11	CARBON	220	5%	1/4W
M2	A-2003-474-A	MOTOR (REEL MOTOR) ASSY	R51	1-249-441-11	CARBON	100K	5%	1/4W
Q51	8-729-194-57	TRANSISTOR 2SC945-P	R52	1-249-441-11	CARBON	100K	5%	1/4W
Q52	8-729-194-57	TRANSISTOR 2SC945-P	R53	1-249-429-11	CARBON	10K	5%	1/4W
Q53	8-729-801-84	TRANSISTOR 2SB1013-4	R54	1-212-851-00	FUSIBLE	5.6	5%	1/4W
Q71	8-729-820-16	TRANSISTOR 2SA1317-S	R55	1-249-429-11	CARBON	10K	5%	1/4W
Q101	8-729-900-74	TRANSISTOR DTC143TS	R71	1-247-864-11	CARBON	24K	5%	1/4W
Q102	8-729-900-74	(WR720)....TRANSISTOR DTC143TS	R72	1-249-433-11	CARBON	22K	5%	1/4W
Q121	8-729-821-31	TRANSISTOR 2SD1012-FG	R73	1-249-437-11	CARBON	47K	5%	1/4W
Q171	8-729-821-31	TRANSISTOR 2SD1012-FG	R74	1-249-437-11	CARBON	47K	5%	1/4W
Q201	8-729-900-74	TRANSISTOR DTC143TS	R81	1-249-414-11	CARBON	560	5%	1/4W
Q202	8-729-900-74	(WR720)....TRANSISTOR DTC143TS	R82	1-247-818-11	CARBON	300	5%	1/4W
Q221	8-729-821-31	TRANSISTOR 2SD1012-FG	R83	1-247-834-11	CARBON	1.3K	5%	1/4W
Q271	8-729-821-31	TRANSISTOR 2SD1012-FG	R84	1-249-417-11	CARBON	1K	5%	1/4W
Q501	8-729-900-65	TRANSISTOR DTA114ES	R85	1-249-408-11	CARBON	180	5%	1/4W
Q502	8-729-900-65	TRANSISTOR DTA114ES	R101	1-249-423-11	CARBON	3.3K	5%	1/4W
Q503	8-729-900-65	(WR720)....TRANSISTOR DTA114ES	R102	1-247-887-00	CARBON	220K	5%	1/4W
Q504	8-729-900-65	TRANSISTOR DTA114ES	R103	1-249-441-11	(WR720)....			
Q505	8-729-900-89	TRANSISTOR DTC144ES	R104	1-249-423-11	CARBON	3.3K	5%	1/4W
Q521	8-729-900-61	TRANSISTOR DTA114ES	R105	1-249-428-11	CARBON	8.2K	5%	1/4W
Q551	8-729-900-61	TRANSISTOR DTA114ES	R106	1-247-864-11	CARBON	24K	5%	1/4W
Q552	8-729-821-31	TRANSISTOR 2SD1012-FG	R107	1-249-414-11	CARBON	560	5%	1/4W
Q553	8-729-821-31	TRANSISTOR 2SD1012-FG	R119	1-249-421-11	CARBON	2.2K	5%	1/4W
Q571	8-729-900-65	TRANSISTOR DTA114ES	R121	1-249-425-11	CARBON	4.7K	5%	1/4W
Q572	8-729-821-04	TRANSISTOR 2SA1317-STU	R124	1-249-426-11	CARBON	5.6K	5%	1/4W
Q601	8-729-900-89	TRANSISTOR DTC144ES	R125	1-249-421-11	CARBON	2.2K	5%	1/4W
Q701	8-729-920-98	TRANSISTOR 2SD1761-EF	R126	1-249-429-11	CARBON	10K	5%	1/4W
Q702	8-729-620-05	TRANSISTOR 2SC2603-EF	R131	1-249-408-11	CARBON	180	5%	1/4W
Q703	8-729-821-04	TRANSISTOR 2SA1317-STU	R132	1-249-433-11	(WR720A)....			
Q704	8-729-920-97	TRANSISTOR 2SB1187-EF	R132	1-249-434-11	(WR720)....			
Q705	8-729-920-97	TRANSISTOR 2SB1187-EF	R133	1-249-421-11	CARBON	2.2K	5%	1/4W
Q706	8-729-900-85	TRANSISTOR DTC144WS	R134	1-249-435-11	CARBON	33K	5%	1/4W
Q707	8-729-920-98	TRANSISTOR 2SD1761-EF	R151	1-249-425-11	CARBON	4.7K	5%	1/4W
Q708	8-729-900-89	TRANSISTOR DTC144ES	R153	1-249-421-11	CARBON	2.2K	5%	1/4W
Q801	8-729-801-84	TRANSISTOR 2SB1013-4	R155	1-249-426-11	CARBON	5.6K	5%	1/4W
Q802	8-729-801-84	TRANSISTOR 2SB1013-4						
Q803	8-729-900-61	TRANSISTOR DTA114ES						

Ref.No	Part No.	Description	Ref.No	Part No.	Description						
R156	1-249-429-11	CARBON	10K	5%	1/4W	R495	1-247-864-11	CARBON	24K	5%	1/4W
R171	1-249-433-11	CARBON	22K	5%	1/4W	R501	1-249-429-11	CARBON	10K	5%	1/4W
R172	1-249-417-11	CARBON	1K	5%	1/4W	R502	1-249-434-11	CARBON	27K	5%	1/4W
R173	1-247-858-11	CARBON	13K	5%	1/4W	R503	1-249-417-11	CARBON	1K	5%	1/4W
R174	1-249-421-11	CARBON	2.2K	5%	1/4W	R504	1-249-429-11	CARBON	10K	5%	1/4W
R181	1-249-429-11	(WR720A)....				R505	1-249-429-11	CARBON	10K	5%	1/4W
		CARBON	10K	5%	1/4W	R506	1-249-429-11	CARBON	10K	5%	1/4W
R181	1-249-433-11	(WR720)....				R507	1-249-441-11	CARBON	100K	5%	1/4W
		CARBON	22K	5%	1/4W	R521	1-249-440-11	CARBON	82K	5%	1/4W
R182	1-249-421-11	(WR720)....				R522	1-247-876-11	CARBON	75K	5%	1/4W
		CARBON	2.2K	5%	1/4W						
R183	1-249-433-11	(WR720)....				R523	1-247-882-11	CARBON	130K	5%	1/4W
		CARBON	22K	5%	1/4W	R524	1-247-874-11	CARBON	62K	5%	1/4W
R184	1-249-405-11	(WR720A)....				R525	1-249-434-11	CARBON	27K	5%	1/4W
		CARBON	100	5%	1/4W	R526	1-247-868-11	CARBON	36K	5%	1/4W
R184	1-249-409-11	(WR720)....				R527	1-247-887-00	CARBON	220K	5%	1/4W
		CARBON	220	5%	1/4W						
R191	1-249-420-11	CARBON	1.8K	5%	1/4W	R528	1-247-874-11	CARBON	62K	5%	1/4W
R201	1-249-423-11	CARBON	3.3K	5%	1/4W	R529	1-247-883-00	CARBON	150K	5%	1/4W
R202	1-247-887-00	CARBON	220K	5%	1/4W	R530	1-247-882-11	CARBON	130K	5%	1/4W
R203	1-249-441-11	(WR720)....				R531	1-247-868-11	CARBON	36K	5%	1/4W
		CARBON	100K	5%	1/4W	R532	1-249-437-11	CARBON	47K	5%	1/4W
R204	1-249-423-11	CARBON	3.3K	5%	1/4W						
R205	1-249-428-11	CARBON	8.2K	5%	1/4W	R533	1-247-890-11	CARBON	300K	5%	1/4W
R206	1-247-864-11	CARBON	24K	5%	1/4W	R534	1-247-882-11	CARBON	130K	5%	1/4W
R207	1-249-414-11	CARBON	560	5%	1/4W	R535	1-247-874-11	CARBON	62K	5%	1/4W
R219	1-249-421-11	CARBON	2.2K	5%	1/4W	R536	1-247-868-11	CARBON	36K	5%	1/4W
R221	1-249-425-11	CARBON	4.7K	5%	1/4W	R537	1-247-870-11	CARBON	43K	5%	1/4W
R224	1-249-426-11	CARBON	5.6K	5%	1/4W						
R225	1-249-421-11	CARBON	2.2K	5%	1/4W	R538	1-247-872-11	CARBON	51K	5%	1/4W
R226	1-249-429-11	CARBON	10K	5%	1/4W	R539	1-247-864-11	CARBON	24K	5%	1/4W
R231	1-249-408-11	CARBON	180	5%	1/4W	R541	1-249-441-11	CARBON	100K	5%	1/4W
R232	1-249-433-11	(WR720A)....				R542	1-249-417-11	CARBON	1K	5%	1/4W
		CARBON	22K	5%	1/4W	R551	1-249-440-11	CARBON	82K	5%	1/4W
R232	1-249-434-11	(WR720)....				R552	1-247-876-11	CARBON	75K	5%	1/4W
		CARBON	27K	5%	1/4W	R553	1-247-882-11	CARBON	130K	5%	1/4W
R233	1-249-421-11	CARBON	2.2K	5%	1/4W	R554	1-247-874-11	(WR720A)....			
R234	1-249-435-11	CARBON	33K	5%	1/4W						
R251	1-249-425-11	CARBON	4.7K	5%	1/4W	R554	1-247-876-11	(WR720)....			
R253	1-249-421-11	CARBON	2.2K	5%	1/4W	R555	1-249-434-11	(WR720A)....			
R255	1-249-426-11	CARBON	5.6K	5%	1/4W						
R256	1-249-429-11	CARBON	10K	5%	1/4W	R555	1-249-435-11	(WR720)....			
R271	1-249-433-11	CARBON	22K	5%	1/4W						
R272	1-249-417-11	CARBON	1K	5%	1/4W	R556	1-247-868-11	(WR720A)....			
R273	1-247-858-11	CARBON	13K	5%	1/4W						
R274	1-249-421-11	CARBON	2.2K	5%	1/4W	R556	1-247-868-11	(WR720A)....			
R281	1-249-429-11	(WR720A)....									
		CARBON	10K	5%	1/4W	R557	1-247-887-00	CARBON	33K	5%	1/4W
R281	1-249-433-11	(WR720)....				R558	1-247-874-11	CARBON	36K	5%	1/4W
		CARBON	22K	5%	1/4W						
R282	1-249-421-11	(WR720)....				R559	1-247-883-00	CARBON	150K	5%	1/4W
		CARBON	2.2K	5%	1/4W	R560	1-247-882-11	CARBON	130K	5%	1/4W
R282	1-249-421-11	(WR720)....				R561	1-247-868-11	(WR720A)....			
		CARBON	22K	5%	1/4W						
R283	1-249-433-11	(WR720)....				R561	1-247-870-11	(WR720)....			
		CARBON	22K	5%	1/4W						
R284	1-249-405-11	(WR720A)....				R562	1-249-437-11	(WR720A)....			
		CARBON	100	5%	1/4W						
R284	1-249-409-11	(WR720)....				R562	1-249-438-11	(WR720)....			
		CARBON	220	5%	1/4W						
R291	1-249-420-11	CARBON	1.8K	5%	1/4W	R563	1-247-890-11	CARBON	56K	5%	1/4W
R391	1-249-430-11	CARBON	12K	5%	1/4W	R564	1-247-882-11	CARBON	300K	5%	1/4W
R392	1-247-883-00	CARBON	150K	5%	1/4W	R565	1-247-874-11	CARBON	130K	5%	1/4W
R393	1-249-393-11	CARBON	10	5%	1/4W	R566	1-247-868-11	(WR720A)....			
R394	1-249-431-11	CARBON	15K	5%	1/4W						
R395	1-247-864-11	CARBON	24K	5%	1/4W	R566	1-247-883-00	CARBON	62K	5%	1/4W
R491	1-249-430-11	CARBON	12K	5%	1/4W						
R492	1-247-883-00	CARBON	150K	5%	1/4W	R566	1-249-436-11	(WR720)....			
R493	1-249-393-11	CARBON	10	5%	1/4W						
R494	1-249-431-11	CARBON	15K	5%	1/4W	R567	1-247-870-11	(WR720A)....			
						R567	1-247-872-11	(WR720)....			

Ref.No	Part No.	Description			Ref.No	Part No.	Description					
R568	1-247-872-11	(WR720A)....	CARBON	51K	5%	1/4W	R709	1-249-426-11	CARBON	5.6K	5%	1/4W
R568	1-247-874-11	(WR720)....	CARBON	62K	5%	1/4W	R710	1-249-422-11	CARBON	2.7K	5%	1/4W
R569	1-247-880-11	CARBON	110K	5%	1/4W	R711	1-249-430-11	CARBON	12K	5%	1/4W	
R570	1-247-868-11	CARBON	36K	5%	1/4W	R712	1-249-429-11	CARBON	10K	5%	1/4W	
R571	1-247-874-11	CARBON	62K	5%	1/4W	R713	1-249-409-11	CARBON	220	5%	1/4W	
R572	1-247-868-11	(WR720A)....	CARBON	36K	5%	1/4W	R714	1-249-429-11	CARBON	10K	5%	1/4W
R572	1-247-870-11	(WR720)....	CARBON	43K	5%	1/4W	R715	1-249-429-11	CARBON	10K	5%	1/4W
R573	1-247-866-11	(WR720A)....	CARBON	30K	5%	1/4W	R721	1-249-429-11	CARBON	10K	5%	1/4W
R573	1-247-868-11	(WR720)....	CARBON	36K	5%	1/4W	R801	1-249-434-11	CARBON	27K	5%	1/4W
R574	1-249-432-11	(WR720A)....	CARBON	18K	5%	1/4W	R804	1-249-434-11	CARBON	27K	5%	1/4W
R574	1-249-433-11	(WR720)....	CARBON	22K	5%	1/4W	R805	1-247-895-00	CARBON	470K	5%	1/4W
R575	1-247-880-11	CARBON	110K	5%	1/4W	R806	1-247-895-00	CARBON	470K	5%	1/4W	
R576	1-249-437-11	CARBON	47K	5%	1/4W	R807	1-247-895-00	CARBON	470K	5%	1/4W	
R577	1-249-438-11	CARBON	56K	5%	1/4W	R808	1-247-895-00	CARBON	470K	5%	1/4W	
R578	1-247-868-11	(WR720A)....	CARBON	36K	5%	1/4W	R809	1-249-425-11	CARBON	4.7K	5%	1/4W
R578	1-247-870-11	(WR720)....	CARBON	43K	5%	1/4W	R810	1-247-862-11	CARBON	20K	5%	1/4W
R579	1-247-870-11	(WR720A)....	CARBON	43K	5%	1/4W	R811	1-249-425-11	CARBON	4.7K	5%	1/4W
R579	1-249-438-11	(WR720)....	CARBON	56K	5%	1/4W	R812	1-247-862-11	CARBON	20K	5%	1/4W
R580	1-249-436-11	CARBON	39K	5%	1/4W	R813	1-249-437-11	CARBON	47K	5%	1/4W	
R581	1-247-881-00	CARBON	120K	5%	1/4W	R814	1-247-866-11	CARBON	30K	5%	1/4W	
R582	1-247-872-11	CARBON	51K	5%	1/4W	R815	1-249-435-11	CARBON	33K	5%	1/4W	
R583	1-249-437-11	CARBON	47K	5%	1/4W	R816	1-247-872-11	CARBON	51K	5%	1/4W	
R584	1-247-862-11	(WR720A)....	CARBON	20K	5%	1/4W	R818	1-247-872-11	CARBON	51K	5%	1/4W
R584	1-249-434-11	(WR720)....	CARBON	27K	5%	1/4W	R819	1-249-405-11	CARBON	100	5%	1/4W
R585	1-247-874-11	(WR720)....	CARBON	62K	5%	1/4W	R820	1-249-437-11	CARBON	47K	5%	1/4W
R585	1-249-438-11	(WR720A)....	CARBON	56K	5%	1/4W	R821	1-247-866-11	CARBON	30K	5%	1/4W
R586	1-247-868-11	(WR720A)....	CARBON	36K	5%	1/4W	R822	1-249-435-11	CARBON	33K	5%	1/4W
R586	1-249-436-11	(WR720)....	CARBON	39K	5%	1/4W	R823	1-247-872-11	CARBON	51K	5%	1/4W
R587	1-247-864-11	CARBON	24K	5%	1/4W	R825	1-249-405-11	CARBON	100	5%	1/4W	
R591	1-249-409-11	CARBON	220	5%	1/4W	R826	1-247-872-11	CARBON	51K	5%	1/4W	
R594	1-249-441-11	CARBON	100K	5%	1/4W	R827	1-249-441-11	CARBON	100K	5%	1/4W	
R595	1-249-442-11	CARBON	510	5%	1/4W	R828	1-249-429-11	CARBON	10K	5%	1/4W	
R598	1-249-441-11	CARBON	100K	5%	1/4W	R829	1-249-429-11	CARBON	10K	5%	1/4W	
R599	1-249-417-11	CARBON	1K	5%	1/4W	R830	1-249-429-11	CARBON	10K	5%	1/4W	
R602	1-247-887-00	CARBON	220K	5%	1/4W	R831	1-249-429-11	CARBON	10K	5%	1/4W	
R603	1-249-425-11	CARBON	4.7K	5%	1/4W	R832	1-249-417-11	CARBON	1K	5%	1/4W	
R604	1-249-441-11	CARBON	100K	5%	1/4W	R833	1-249-435-11	CARBON	33K	5%	1/4W	
R605	1-249-428-11	CARBON	8.2K	5%	1/4W	R858	1-249-432-11	CARBON	18K	5%	1/4W	
R606	1-249-437-11	CARBON	47K	5%	1/4W	R859	1-249-436-11	CARBON	39K	5%	1/4W	
R607	1-249-417-11	CARBON	1K	5%	1/4W	R860	1-247-854-11	CARBON	9.1K	5%	1/4W	
R608	1-249-441-11	CARBON	100K	5%	1/4W	R862	1-247-858-11	(WR720)....	13K	5%	1/4W	
R609	1-249-423-11	CARBON	3.3K	5%	1/4W	R862	1-249-432-11	(WR720A)....	18K	5%	1/4W	
R701	1-249-421-11	CARBON	2.2K	5%	1/4W	R863	1-249-436-11	(WR720A)....	39K	5%	1/4W	
R702	1-249-421-11	CARBON	2.2K	5%	1/4W	R864	1-247-854-11	(WR720A)....	9.1K	5%	1/4W	
R703	1-247-856-00	CARBON	11K	5%	1/4W	R864	1-249-424-11	(WR720)....	3.9K	5%	1/4W	
R704	1-249-428-11	CARBON	8.2K	5%	1/4W	R865	1-247-810-11	(WR720)....	130	5%	1/4W	
R705	1-249-425-11	CARBON	4.7K	5%	1/4W	R868	1-249-429-11	CARBON	10K	5%	1/4W	
R706	1-249-429-11	CARBON	10K	5%	1/4W	R869	1-249-429-11	CARBON	10K	5%	1/4W	
R707	1-249-409-11	CARBON	220	5%	1/4W	R870	1-249-429-11	CARBON	10K	5%	1/4W	
R708	1-249-420-11	CARBON	1.8K	5%	1/4W	R874	1-247-903-00	CARBON	1M	5%	1/4W	
R704	1-249-428-11	CARBON	8.2K	5%	1/4W	R891	1-249-429-11	CARBON	10K	5%	1/4W	
R705	1-249-425-11	CARBON	4.7K	5%	1/4W	R892	1-249-429-11	CARBON	10K	5%	1/4W	
R706	1-249-429-11	CARBON	10K	5%	1/4W	R893	1-249-415-11	CARBON	680	5%	1/4W	
R707	1-249-409-11	CARBON	220	5%	1/4W	R894	1-249-415-11	CARBON	680	5%	1/4W	
R708	1-249-420-11	CARBON	1.8K	5%	1/4W	R901	1-249-429-11	CARBON	10K	5%	1/4W	
R704	1-249-428-11	CARBON	8.2K	5%	1/4W	R902	1-249-429-11	CARBON	10K	5%	1/4W	
R705	1-249-425-11	CARBON	4.7K	5%	1/4W	R903	1-249-429-11	CARBON	10K	5%	1/4W	
R706	1-249-429-11	CARBON	10K	5%	1/4W	R904	1-249-429-11	CARBON	10K	5%	1/4W	
R707	1-249-409-11	CARBON	220	5%	1/4W	R905	1-247-903-00	CARBON	1M	5%	1/4W	
R708	1-249-420-11	CARBON	1.8K	5%	1/4W	R907	1-249-415-11	(WR720A)....	680	5%	1/4W	

Ref.No	Part No.	Description	Ref.No	Part No.	Description
R908	1-249-415-11	(WR720A).... CARBON 680 5% 1/4W	RV501	1-238-953-11	(WR720)....RES, VAR, CARBON 50K/50K (BALANCE)
R909	1-249-415-11	(WR720A).... CARBON 680 5% 1/4W	RV502	1-241-133-11	(WR720)....RES, VAR, CARBON 50K/50K (REC LEVEL)
R910	1-249-415-11	(WR720A).... CARBON 680 5% 1/4W	RV503	1-238-085-11	(WR720)....RES, VAR, CARBON 20K/20K (PHONES LEVEL)
R918	1-249-413-11	CARBON 470 5% 1/4W	RV901	1-241-058-11	(WR720A)....RES, VAR, CARBON 50K/50K (REC LEVEL)
R919	1-249-437-11	CARBON 47K 5% 1/4W	RV901	1-241-134-11	(WR720)....RES, VAR, CARBON 20K (BIAS (DECK B))
R920	1-249-437-11	CARBON 47K 5% 1/4W	RV902	1-241-057-11	(WR720A)....RES, VAR, CARBON 50K/50K (BALANCE)
R921	1-249-407-11	CARBON 150 5% 1/4W	RV0391	1-230-497-11	RES, ADJ, CARBON 22K
R922	1-249-409-11	CARBON 220 5% 1/4W	RV0491	1-230-497-11	RES, ADJ, CARBON 22K
R923	1-249-411-11	CARBON 330 5% 1/4W	RY31	1-515-726-11	RELAY
R924	1-249-413-11	CARBON 470 5% 1/4W	S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)
R925	1-249-415-11	CARBON 680 5% 1/4W	S82	1-571-281-21	SWITCH, LEAF (CrO ₂ DET))
R926	1-249-417-11	CARBON 1K 5% 1/4W	S83	1-571-281-21	SWITCH, LEAF (METAL DET)
R927	1-249-420-11	CARBON 1.8K 5% 1/4W	S84	1-571-281-21	SWITCH, LEAF (ERASE PROOF (SIDE A))
R928	1-249-424-11	CARBON 3.9K 5% 1/4W	S85	1-571-281-21	SWITCH, LEAF (ERASE PROOF (SIDE B))
R929	1-249-407-11	CARBON 150 5% 1/4W	S86	1-571-281-21	SWITCH, LEAF (HALF DET)
R930	1-249-409-11	CARBON 220 5% 1/4W	S87	1-572-393-11	SWITCH, LEAF (DIRECTION)
R931	1-249-411-11	CARBON 330 5% 1/4W	S701	▲1-571-305-11	SWITCH, PUSH (1 KEY) (POWER) (E)....SWITCH, VOLTAGE CHANGE
R932	1-249-413-11	CARBON 470 5% 1/4W	S702	▲1-570-307-11	(VOLTAGE SELECTOR)
R933	1-249-415-11	CARBON 680 5% 1/4W	S901	1-554-303-21	SWITCH, KEY BOARD (SYNCHRO DUBBING HIGH SPEED)
R934	1-249-417-11	CARBON 1K 5% 1/4W	S902	1-554-303-21	SWITCH, KEY BOARD (SYNCHRO DUBBING NORM SPEED)
R935	1-249-420-11	CARBON 1.8K 5% 1/4W	S903	1-554-303-21	SWITCH, KEY BOARD (A+B REC)
R936	1-249-424-11	CARBON 3.9K 5% 1/4W	S904	1-554-303-21	SWITCH, KEY BOARD (AUTO PAUSE)
R937	1-249-407-11	CARBON 150 5% 1/4W	S905	1-554-303-21	SWITCH, KEY BOARD (BLANK SKIP) (WR720)....SWITCH, KEY BOARD (COUNTER A/B)
R938	1-249-409-11	CARBON 220 5% 1/4W	S906	1-554-303-21	(WR720A)....SWITCH, KEY BOARD (COUNTER RESET)
R939	1-249-411-11	CARBON 330 5% 1/4W	S907	1-554-303-21	(WR720)....SWITCH, KEY BOARD (COUNTER RESET)
R940	1-249-413-11	CARBON 470 5% 1/4W	S907	1-554-303-21	(WR720A)....SWITCH, KEY BOARD (COUNTER MEMORY)
R941	1-249-415-11	CARBON 680 5% 1/4W	S908	1-554-303-21	(WR720)....SWITCH, KEY BOARD (COUNTER MEMORY)
R942	1-249-417-11	CARBON 1K 5% 1/4W	S908	1-554-303-21	(WR720A)....SWITCH, KEY BOARD (COUNTER A/B)
R943	1-249-420-11	CARBON 1.8K 5% 1/4W	S909	1-554-303-21	SWITCH, KEY BOARD (■ (DECK B))
R944	1-249-424-11	(WR720).... CARBON 3.9K 5% 1/4W	S910	1-554-303-21	SWITCH, KEY BOARD (▷ (DECK B))
R946	1-249-430-11	CARBON 12K 5% 1/4W	S911	1-554-303-21	SWITCH, KEY BOARD (◁ (DECK B))
R948	1-249-430-11	CARBON 12K 5% 1/4W	S912	1-554-303-21	SWITCH, KEY BOARD (PAUSE ■ (DECK B))
R950	1-249-430-11	(WR720).... CARBON 12K 5% 1/4W	S913	1-554-303-21	SWITCH, KEY BOARD (REC MUTE ○ (DECK B))
R951	1-249-433-11	CARBON 22K 5% 1/4W	S914	1-554-303-21	SWITCH, KEY BOARD (◀ (AMS)(DECK A))
R952	1-249-437-11	CARBON 47K 5% 1/4W	S915	1-554-303-21	SWITCH, KEY BOARD (AMS) ▶ (DECK A))
R953	1-249-437-11	CARBON 47K 5% 1/4W	S916	1-554-303-21	SWITCH, KEY BOARD (REC ● (DECK A))
R954	1-249-424-11	CARBON 3.9K 5% 1/4W	S917	1-554-303-21	SWITCH, KEY BOARD (■ (DECK A))
R961	1-249-429-11	CARBON 10K 5% 1/4W	S918	1-554-303-21	SWITCH, KEY BOARD (▷ (DECK A))
R963	1-249-431-11	(WR720).... CARBON 15K 5% 1/4W	S919	1-554-303-21	SWITCH, KEY BOARD (◁ (DECK A))
R0391	1-249-430-11	CARBON 12K 5% 1/4W	S920	1-554-303-21	SWITCH, KEY BOARD (PAUSE ■ (DECK A))
R0392	1-247-883-00	CARBON 150K 5% 1/4W	S921	1-554-303-21	SWITCH, KEY BOARD (REC MUTE ○ (DECK A))
R0393	1-249-393-11	CARBON 10 5% 1/4W	S922	1-554-303-21	SWITCH, KEY BOARD (◀ (AMS)(DECK B))
R0394	1-249-431-11	CARBON 15K 5% 1/4W	S923	1-554-303-21	SWITCH, KEY BOARD (AMS) ▶ (DECK B))
R0395	1-247-864-11	CARBON 24K 5% 1/4W	S924	1-554-303-21	SWITCH, KEY BOARD (REC ● (DECK B))
R0491	1-249-430-11	CARBON 12K 5% 1/4W			
R0492	1-247-883-00	CARBON 150K 5% 1/4W			
R0493	1-249-393-11	CARBON 10 5% 1/4W			
R0494	1-249-431-11	CARBON 15K 5% 1/4W			
R0495	1-247-864-11	CARBON 24K 5% 1/4W			
RV11	1-238-597-11	RES, ADJ, CARBON 1K			
RV21	1-238-597-11	RES, ADJ, CARBON 1K			
RV71	1-238-600-11	RES, ADJ, CARBON 10K			
RV72	1-238-600-11	RES, ADJ, CARBON 10K			
RV121	1-238-600-11	RES, ADJ, CARBON 10K			
RV122	1-238-600-11	RES, ADJ, CARBON 10K			
RV221	1-238-600-11	RES, ADJ, CARBON 10K			
RV222	1-238-600-11	RES, ADJ, CARBON 10K			
RV391	1-230-497-11	RES, ADJ, CARBON 22K			
RV491	1-230-497-11	RES, ADJ, CARBON 22K			

Note:
The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	Part No.	Description
S925	1-571-520-11	(WR720)....SWITCH, SLIDE (DIR MODE)
S925	1-572-401-11	(WR720A)....SWITCH, SLIDE (DIR MODE)
S926	1-571-520-11	(WR720)....SWITCH, SLIDE (DOLBY NR)
S926	1-572-401-11	(WR720A)....SWITCH, SLIDE (DOLBY NR)
S927	1-571-520-11	(WR720)....SWITCH, SLIDE (TIMER)
T51	1-433-366-11	TRANSFORMER, BIAS OSCILLATION
T391	1-433-367-11	TRANSFORMER, BIAS OSCILLATION
T491	1-433-367-11	TRANSFORMER, BIAS OSCILLATION
T701	△1-450-147-11	(US, Canadian)....TRANSFORMER, POWER
T701	△1-450-148-11	(AEP, WG)....TRANSFORMER, POWER
T701	△1-450-191-11	(E)....TRANSFORMER, POWER
T0391	1-433-367-11	TRANSFORMER, BIAS OSCILLATION
T0491	1-433-367-11	TRANSFORMER, BIAS OSCILLATION
TP1	*1-564-505-11	PLUG, CONNECTOR 2P
TP691	*1-564-520-11	PLUG, CONNECTOR 5P
TP0691	*1-564-520-11	PLUG, CONNECTOR 5P
X801	1-577-358-21	VIBRATOR, CERAMIC (4MHz)
X901	1-577-358-21	VIBRATOR, CERAMIC (4MHz)

ACCESSORIES & PACKING MATERIALS

1-463-974-11	(E)....REMOTE COMMANDER (RM-900W)
1-559-533-11	CORD, CONNECTION
△1-569-007-11	(E)....ADAPTER, CONVERSION 2P
*3-354-918-21	INDIVIDUAL CARTON
*3-359-942-01	CUSHION
3-703-450-01	(US)....INSTRUCTION
*3-703-710-41	STICKER, SONY SYMBOL (12)
3-751-915-21	(WR720A)....MANUAL, INSTRUCTION (ENGLISH)
3-751-915-31	(Canadian, E)....MANUAL, INSTRUCTION (FRENCH)
3-751-921-11	(AEP)....MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE)
3-751-921-41	(AEP)....MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN)
3-751-921-51	(WG)....MANUAL, INSTRUCTION (GERMAN)

Note:
The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

TC-WR720/WR720A

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SERVICE MANUAL

US Model

Canadian Model

E Model

TC-WR720A

AEP Model

TC-WR720

SUPPLEMENT-1

File this supplement with the Service Manual.

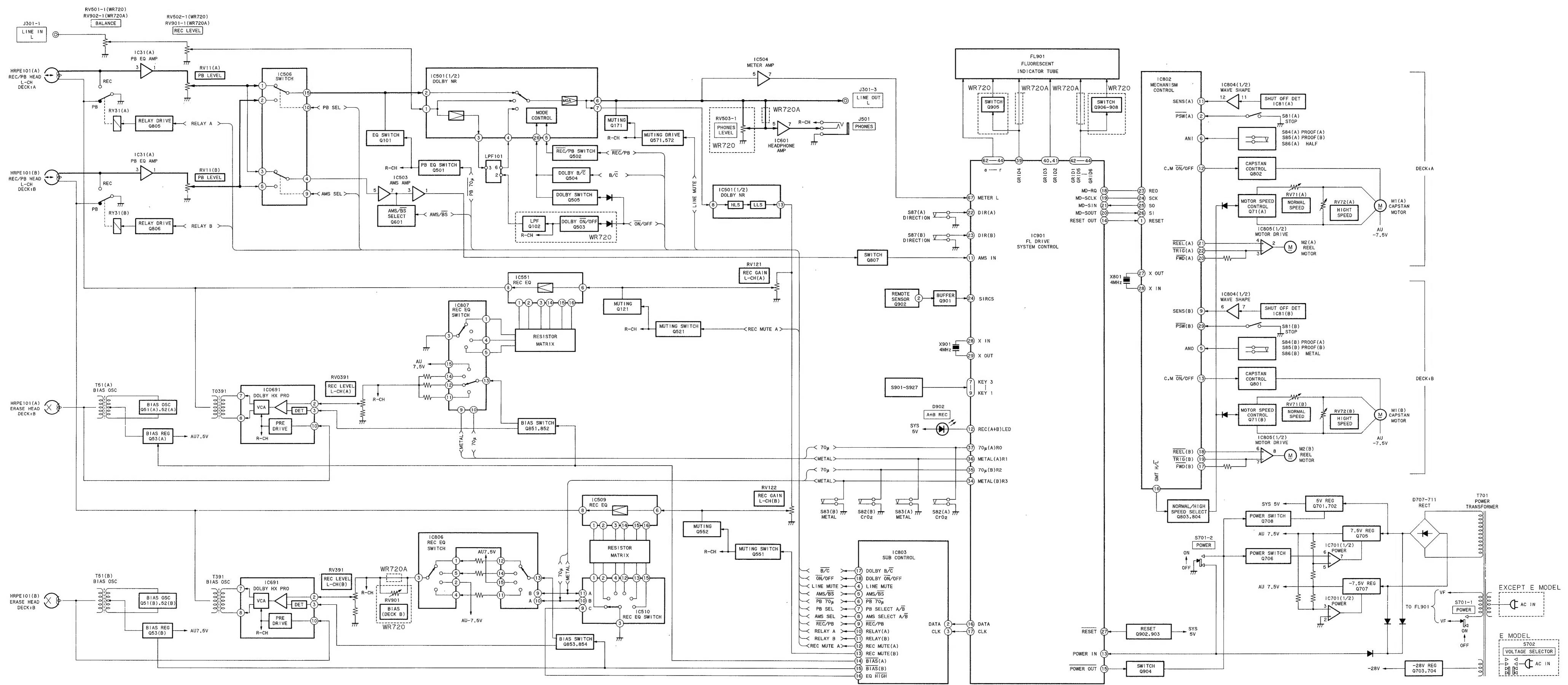
Subject : block diagram

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TC-WR720 /WR720A

SONY SERVICE MANUAL

US Model
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AEP Model
TC-WR720

CORRECTION-1

Correct your service manual as shown below.



: indicates corrected portion.

Page	INCORRECT	CORRECT
10	<p>Playback Level Adjustment</p> <p>: : : : :</p> <p>Adjustment limits :</p> <p>LINE OUT level : $-15 \pm 0.5\text{dB}$(0.130 to 0.146V)</p>	<p>Playback Level Adjustment</p> <p>: : : : :</p> <p>Adjustment limits :</p> <p>LINE OUT level : $-5 \pm 0.5\text{dB}$(<u>0.411 to 0.462V</u>)</p>  